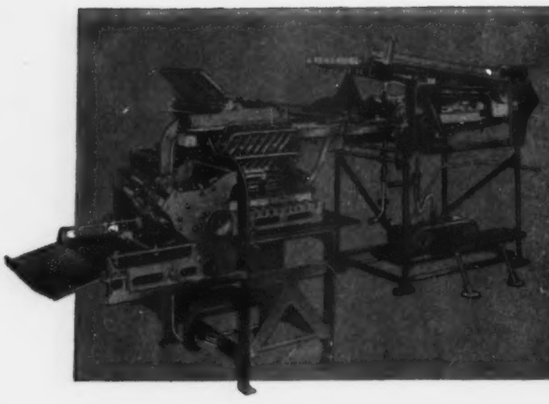
An Industry-Wide Technical Publication

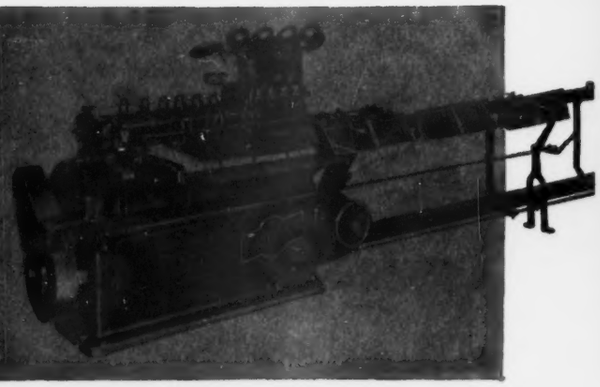
PRINTING EQUIPMENT *Engineer*

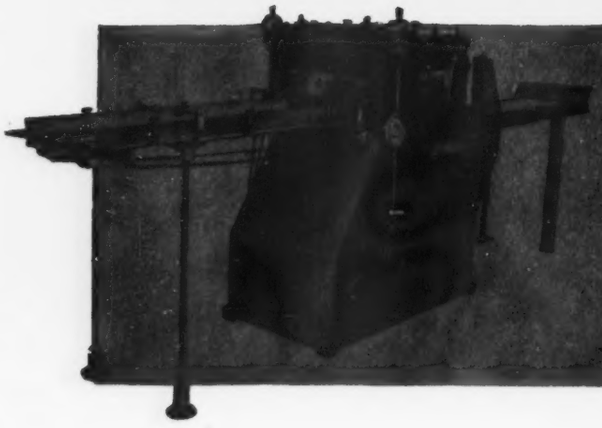
Profits from Pamphlets!



FOLDING is the first step in achieving profits from pamphlets . . . and Cleveland Folders, available in a wide range of sizes, are the standard of the industry. Precision-built, of top quality materials and workmanship, every Cleveland is designed for many years of high-quality, high-speed production.

GATHERING & STITCHING of folded signatures is the next step to bindery profits. The Christensen Gang Stitcher, in the model best suited to your needs, will gather and saddle stitch as fast as operators can feed it . . . up to 7500 books or gangs per hour with McCain Automatic Feeders . . . with unvarying accuracy and reliability.





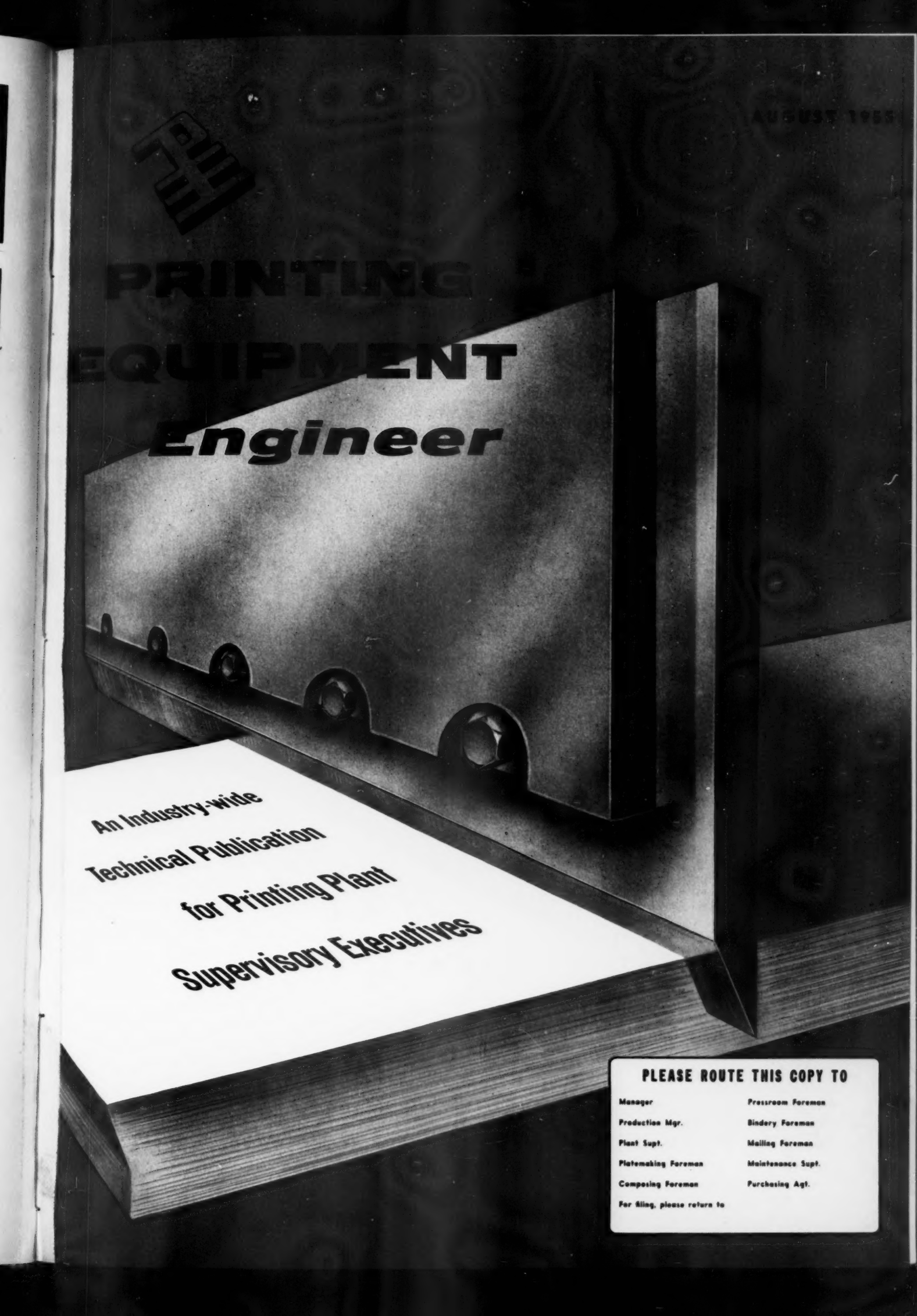
TRIMMING with the McCain Automatic 3-knife Trimmer not only increases profits but saves floor space and handling expense. Untrimmed books from the Christensen Gang Stitcher are automatically conveyed to the McCain Trimmer where 3 sides are trimmed, and finished books delivered ready for wrapping or packing. Books can be trimmed at speeds up to 7500 per hour. Attachments are available for cutting apart books stitched two-up or with bleed trim.

ILLUSTRATED CIRCULARS ARE AVAILABLE FOR ANY OF THE ABOVE MACHINES

DEXTER FOLDER COMPANY

General Sales Office

330 West 42nd Street New York 36, N. Y.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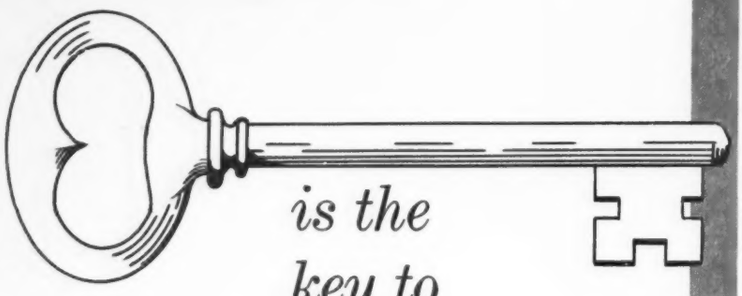
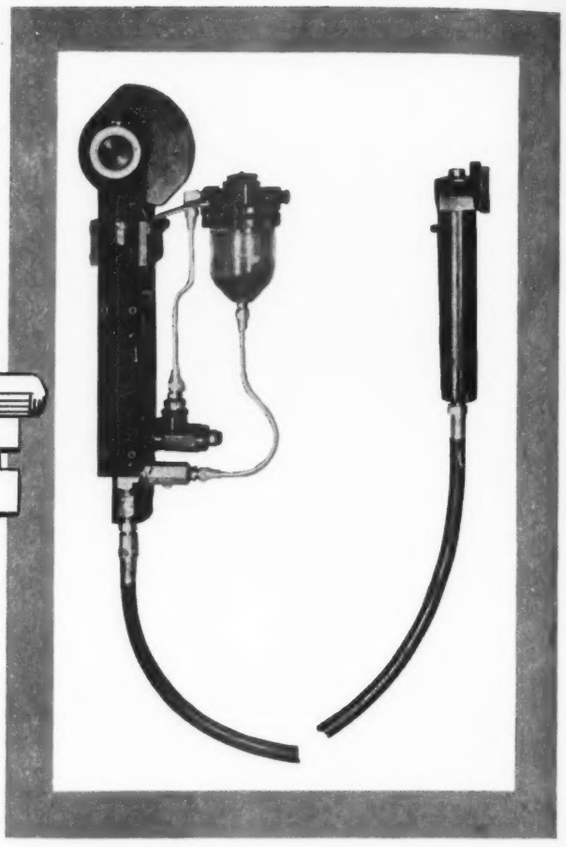
MECHANICAL SIMPLICITY



is the key to easy low-cost maintenance



For example, nothing could be simpler than the hydraulic system of the STAR Selecto-Matic Quadder. The downward motion of a piston in the master cylinder raises a piston in the slave cylinder. That's all the motion that is required for the positive yet "soft" action of the Selecto-Matic Quadder Jaws.

There is only a single hose and only two hose connections in the entire system. All parts of the Selecto-Matic Quadder, including the hydraulic unit, are outside the machine, immediately available for routine servicing.

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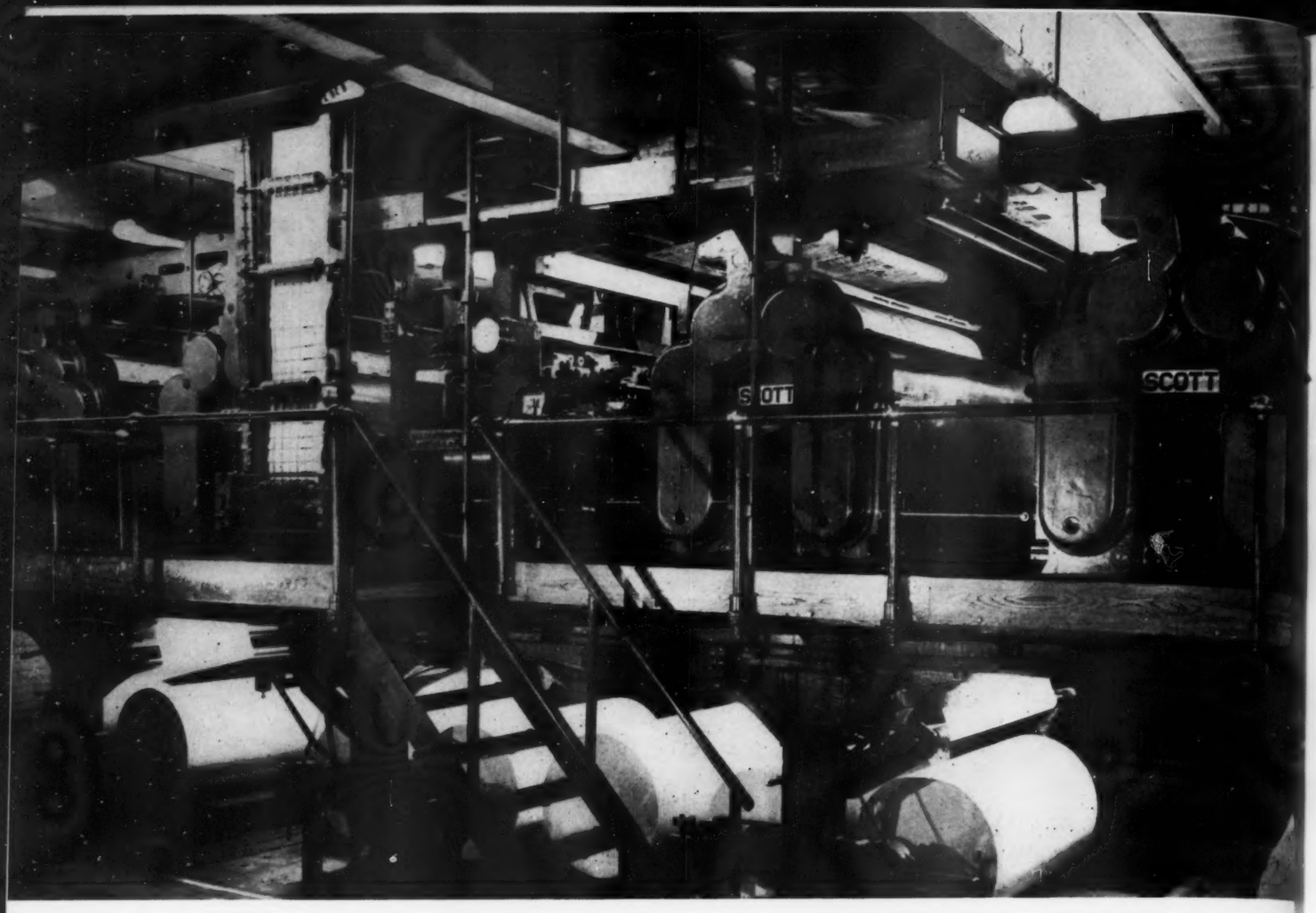


Four-Unit, Mezzanine-Type, Scott Extra High-Speed Presses at the Stamford Advocate, Stamford, Connecticut.

SCOTT EXTRA HIGH-SPEED PRESSES SAVE ON OPERATING COSTS!

When you get a combination of lowest operating costs, top flight engineering, materials and manufacture in a press designed for speed (up to 1000 papers a minute), that is the perfect combination. SCOTT makes these machines in highly standardized, refined and proved designs which allow perfect interchange of parts between presses.

Years ahead engineering gives SCOTT presses trouble-free, economical, continuous performance. A lubrication system designed, as part of the press, for high-speed operation; dynamically balanced solid rotor cylinders and drive shafts; these and many other features make SCOTT the right choice for your pressroom.

Writing about SCOTT presses, Kingsley Gillespie, Publisher of the Stamford Advocate *said, ". . . most in performance per dollar expended." There's another way to say it. "You get better results with SCOTT." Write for detailed information.*

Buy with CONFIDENCE - - - Buy SCOTT

5-55-58

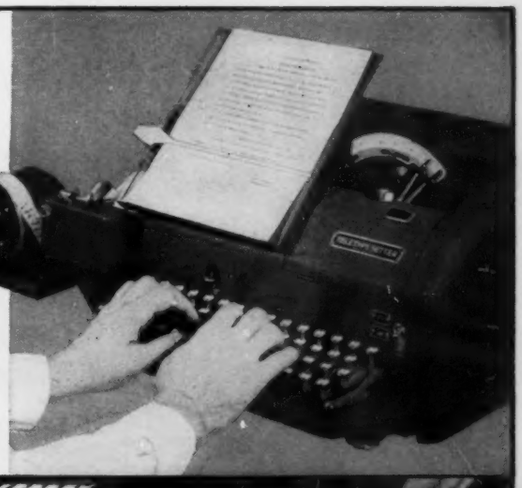
WALTER SCOTT & CO. INC.

PLAINFIELD, NEW JERSEY

2 steps to easier typecasting!

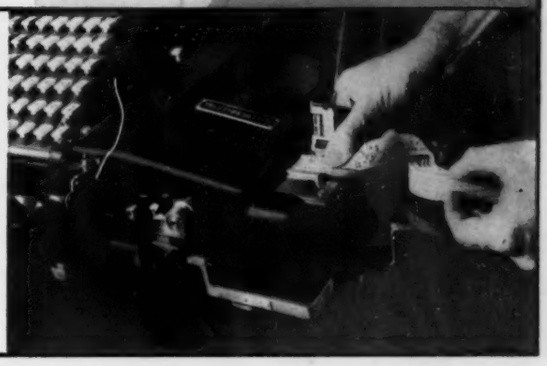
1

Tape is easily punched on a TTS Perforator with a typewriter-like keyboard.



2

Punched tape, feeding through a TTS Operating Unit, produces type automatically!



Teletypesetter equipment for the past twenty-four years has built a reputation as an ingenious economizer, reducing typecasting costs as much as 40%.

Teletypesetter accomplishes this cost reduction by using the successful industrial engineering technique of separating a single complex operation—such as manual composition—into two simpler operations and making one of them completely automatic.

With Teletypesetter you get easier and faster composing by means of a Teletypesetter Perforator. The Perforator has a keyboard similar to a typewriter and its use can be learned easily by anyone who knows the typewriter touch system. In fact, a touch system typist should be able to turn out usable tape in a day or so and after six months' experience should be capable of producing 400 or more 12 pica lines per hour.

When this perforated tape is started through the Teletypesetter Operating Unit (which is attached to a linecasting machine) type is automatically cast at the rate of 400 lines an hour on a standard machine, 600 lines an hour on a high-speed machine. One attendant can monitor at least four Teletypesetter-equipped linecasting machines. If for some reason you want to set a few lines of type manually on a Teletypesetter-equipped linecasting machine it's easy. Simply turn the control lever to the "off" position and the machine is ready for manual operation.

Teletypesetter reduces many problems encountered in operating a newspaper, such as overtime, operator shortages, and the constant struggle to meet critical deadlines. It also provides better control of production because the tape can be punched at high speed... at any location... at any time... and can be stored for future use, or put to work immediately to set type automatically at high speed.

Space doesn't permit us to tell our full story here. For further information write: Teletypesetter Corporation Dept. PE8, 2752 North Clybourn Avenue, Chicago 14, Illinois

TELETYPESETTER

THE BETTMANN ARCHIVE

Here is a modern, "high-speed" belt driven printing press, circa, 1880. The "Illustrated Christian Weekly" is on the press.

THEN

and

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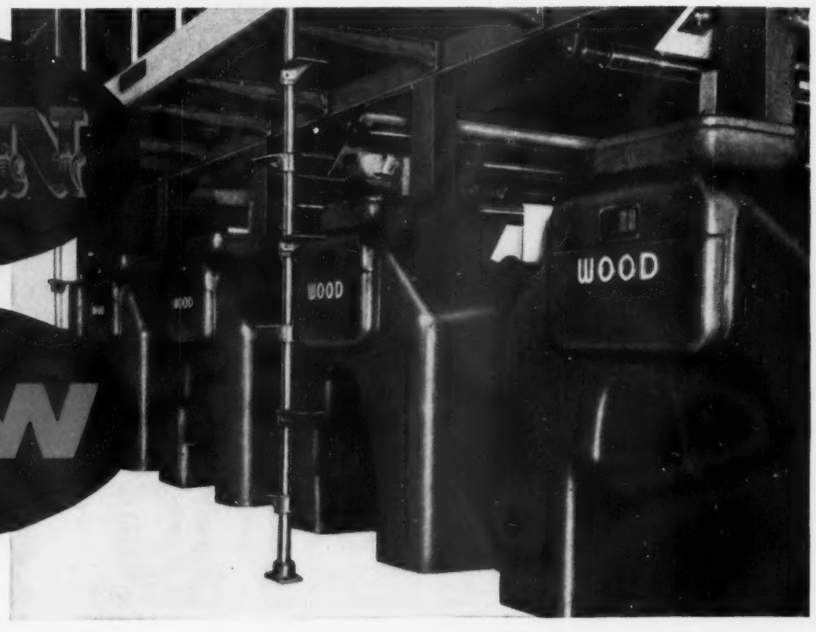

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August 1955

An industry-wide technical magazine published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in the commercial, magazine, private plant and daily newspaper fields.

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Volume 85 **Number 11**

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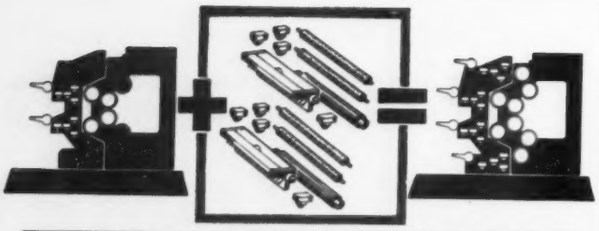

2 COLORS PLUS PARTS EQUALS 4 COLORS (Same Frame)

The Only Press...

that prints a wide range of dimensions both width and length is Hess & Barker's Multi-Color Web Fed Letterpress. And, because the press frame is machined ready to accommodate up to four colors, you can start with a two color press and add two additional colors as your requirements expand. No additional floor or ceiling space is needed. All parts can be installed from quitting time Friday to starting time Monday at surprisingly low cost. The maintenance and production costs are 'way below average. This fact 75% of our customers discovered, because they now own and operate two or more Hess & Barker presses. Speeds 750 feet per minute or up to 10,000 sheets an hour. Write today for additional information.

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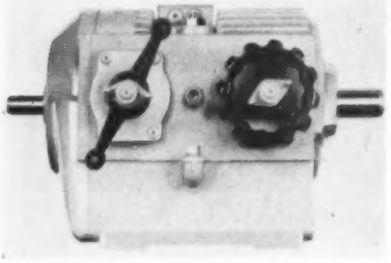
Equipment and Supplies

If you wish additional information concerning equipment, supplies and/or technical literature, please make your request to PRINTING EQUIPMENT Engineer, 1276 West Third St., Cleveland 13, O.

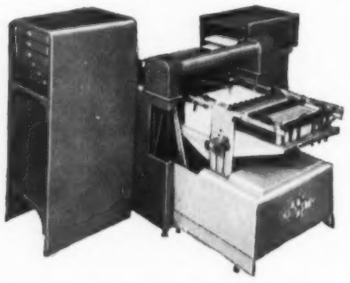
Variable Speed Hydraulic Transmission

The Gerotor Variable Speed Hydraulic Transmission, manufactured by Gerotor May Corp., is applicable to conveyors, printing presses and other equipment. The unit is self contained and consists of a driven oil pump and an output oil motor. Rotating elements are incorporated in an air cooled housing. Working parts are self lubricated. The unit may be directly coupled to the electric motor supplying the constant speed input power or belt driven from a side or top mounted motor, depending upon space limitations. Sponsor claims constant or variable torque and horsepower, max. 3½ h.p., and infinitely variable speeds up to 1500 r.p.m. without gearing. For further details, please mention PEE No. 524 in your request.



Carbon Interleaving Unit

The JCM, Carb-O-Matic Automatic Carbon Interleaving Unit, developed and manufactured by The J. Curry Mendes Corp., was recently announced for production of every type of snapout form. Designed to work with JCM collating and tipping machines, a Carb-O-Matic operator produces snapout forms without touching insertion carbon paper. Tipping glue by foot control automatically actuates the unit and carbon paper is placed in position. A safety check for automatic stopping if a carbon is missed is included in equipment. Solid carbon or clean edge carbon can be used. Two sheets at a time for single forms is possible with the machine. For further details, please mention PEE No. 525 in your request.



Cabinetless Dehumidifier—Adams Equipment Inc.'s Dixie Air Drier is a dehumidifier except that it is not enclosed in a cabinet. The Dixie is a ⅙ h.p. hermetically sealed unit using a Tecumseh compressor. Manufacturer says it will dry the air in an enclosed space of up to 10,000 cu. ft. or a room 25 ft. by 48 ft. with standard ceiling height. The company also says that at 90% humidity, the Dixie unit removes 3 gal. of water every 24 hours yet uses only about the same amount of electricity as a 200 w. light bulb. Pictured are two of the ways the unit can be installed by the owner. For further details, please mention PEE No. 501 in your request.

Magnesium Mounting Bases and Furniture

Magnesium mounting bases and furniture are again available according to Doven Machinery and Engineering, Inc. Magnesium base is used for mounting copper, zinc, rubber and plastic plates, as well as for electros, stereos and as proof press bed blocks. Doven bases are made solid, in all sizes up to 20 in. by 26 in., and larger for special applications, in all thicknesses up to 0.918 in. The bases are also available scored for registration. Doven also produces magnesium furniture in all standard sizes. For details please mention PEE No. 521 in your request.

Double End Book Compressor

Gane Brothers & Co. recently introduced a double end book compressor. The ma-

(Continued on Page 10)

"Some Reasons Why Printers Prefer Ludlow"

That's the title of the big 32-page booklet we have recently completed. It outlines in detail some outstanding Ludlow advantages and operating economies which you should know about.

This big booklet graphically illustrates and describes the way in which the Ludlow helps to solve such printing plant problems as type shortages, type breakage, scarcity of spacing material, excessive press make-ready, press work-ups, congested floor space, multiple forms, and ruleform composition—to mention just a few.

As you go through this booklet you will realize some of the reasons why so many progressive printing and publishing firms, specialty printers and others have discarded the old, time-honored typesetting methods and have changed to the improved Ludlow system of all-slug display and job composition.

Send for your free copy of this big 32-page booklet—it will give you a better understanding of Ludlow's contribution to efficient composing room production. It is real information for you.

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More than 300 Signode Wire Tying Machines are in use by the nation's newspapers—many of them continuously for more than 25 years! Such preference results only when performance warrants it. More than that—when a mechanical superintendent decides upon a Signode Wire Tying Machine, he knows that he is not buying an experiment and a maintenance headache!

In 30 years of manufacturing wire tying machines, Signode has found, and *eliminated,* the "bugs" that stop machines and snarl deliveries—and in doing so, has improved the quality of the machine in design and construction.

Signode offers a heavier, sturdier machine. Component parts—all interchangeable—have longer life. Maintenance is at a minimum. Adjustments and parts replacements are easier to make, with less down time.

Whether your circulation is 50,000 or 5,000,000 Signode Wire Tying Machines offer optimum performance and economies too important to overlook. Write for full details!

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ORIGINAL HEIDELBERG

the best thing next to a printer

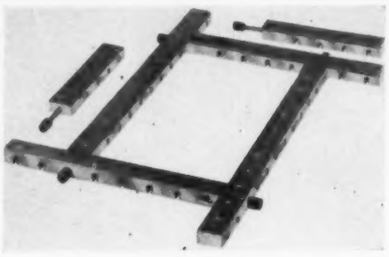
Equipment & Supplies

(Continued from Page 6)

chine embodies an all steel frame. Operation is mechanical, and individual pressure jaw adjustment allows the same or different jobs to be run at each end of the machine. For further details, please mention PEE No. 506 in your request.

Adjustable Breakaway Chase

To meet the demand of advertisers for mats from platemakers and the exchange between newspapers of mats, The Shaw Machine & Tool Co. has developed the Smatco Breakaway Chase. The chase is built for lockup on all sizes of ads of less than page size and enables accomplishment of lockup with bolsters and trim lines. The Smatco consists of six removable, type high bars. The side bars being marked in



inches, 2 in. to 22 in., also in picas, with a shorter bar also supplied for small job setups. The horizontal slotted bars are marked in columns one to seven, with a shorter bar also supplied. The bars enable the form to be rolled in either direction through the mat roller. Lockup is accomplished by unloosening the four knurled, tapered steel lockup screws, lifting the bars out of the milled slots, then laying them down over the slots of the required size; by then tightening up the lockup screws, the chase is locked up at 90 deg. angles. For further details, please mention PEE No. 522 in your request.

Egyptian Type Face

In tune with the trend of contrasting type in typography, Amsterdam Continental Types and Graphic Equipment, Inc., announced two styles of block serif types known as the Egyptians. Amsterdam's Egyptian design is available in a Bold

Amsterdam Type

Egyptian Bold Condensed, 24 point small

Amsterdam Netherlands

Egyptian Bold Extended, 18 point

Condensed and a Bold Extended, both in sizes from 8 pt. to 72 pt. For further details, please mention PEE No. 526 in your request.

Temporary Reflective Ink

A reflective screen process ink for paper and card stock was announced by Minnesota Mining and Mfg. Co. Marketed under the brand name Codit, the reflective ink appears in light gray tone during daylight hours and at night reflects light as bright silver. Codit is designed specifically for temporary, changeable copy advertising signs used in 30 to 90 day campaigns. The reflective ink is used with 8X or 8XX mesh silk screen. For further details, please mention PEE No. 499 in your request.

Covered Glue Can—A can designed to dispense and store glue, rubber cement and similar products has recently been developed by George D. Ellis & Sons, Inc. A handle is soldered onto the side of the can opposite a 5 in. wiping bar for removal of excess glue from the brush. The 2½ in. diam., 5 in. long chimney is fitted over the brush handle when not in use. This Ellisco can is 5⅞ in. diam. by 4 in. body height; capacity is 1¾ qts. For further details, please mention PEE No. 502 in your request.

Magenta and Gray Contact Screens

The Eastman Kodak Co. recently announced a 29 in. by 29 in. screen with an over-all size of 31 in. by 31 in. which has been added to the Kodak Magenta and Gray Contact Screen lines for photolithography. In magenta the size will be available in 120, 133, and 150 line rulings. In gray the size is available in 150 line rulings

(*Continued on Page 14*)

Photo by Constance Bannister

"Gee . . . only BURGESS MATS could do a job that good!"

BURGESS CELLULOSE COMPANY

Manufacturers and Distributors of Burgess Chrome and Tone-Tex Mats

Freeport, Illinois

A Laboratory Product
BURGESS Chrome MATS

Maintain constant speed with G.E.'s ACA press drive

You get adjustable speed direct from a-c power, controlled acceleration to the speed you choose

Steadier production and more good sheets on the delivery pile are yours when your press is equipped with a General Electric adjustable speed ACA press drive. You maintain constant press speed because this drive gives you controlled acceleration to the exact speed you choose **and holds it**—regardless of differences in weight of paper, tackiness of inks, or other load changes. This frees your operator from frequent speed adjustments during the run, cuts sheet spoilage as well.

You save floor space and maintenance costs too, because the entire ACA drive can be press-mounted, speed control is self-contained in the motor, and bulky conversion equipment is eliminated.

Next time you buy a commercial printing press—offset or letterpress—specify a G-E ACA press drive. For more information, contact your nearest Apparatus Sales representative, agent or distributor, or write for Bulletin GEA-5568 to General Electric Company, Section 653-35, Schenectady 5, New York.

Progress Is Our Most Important Product

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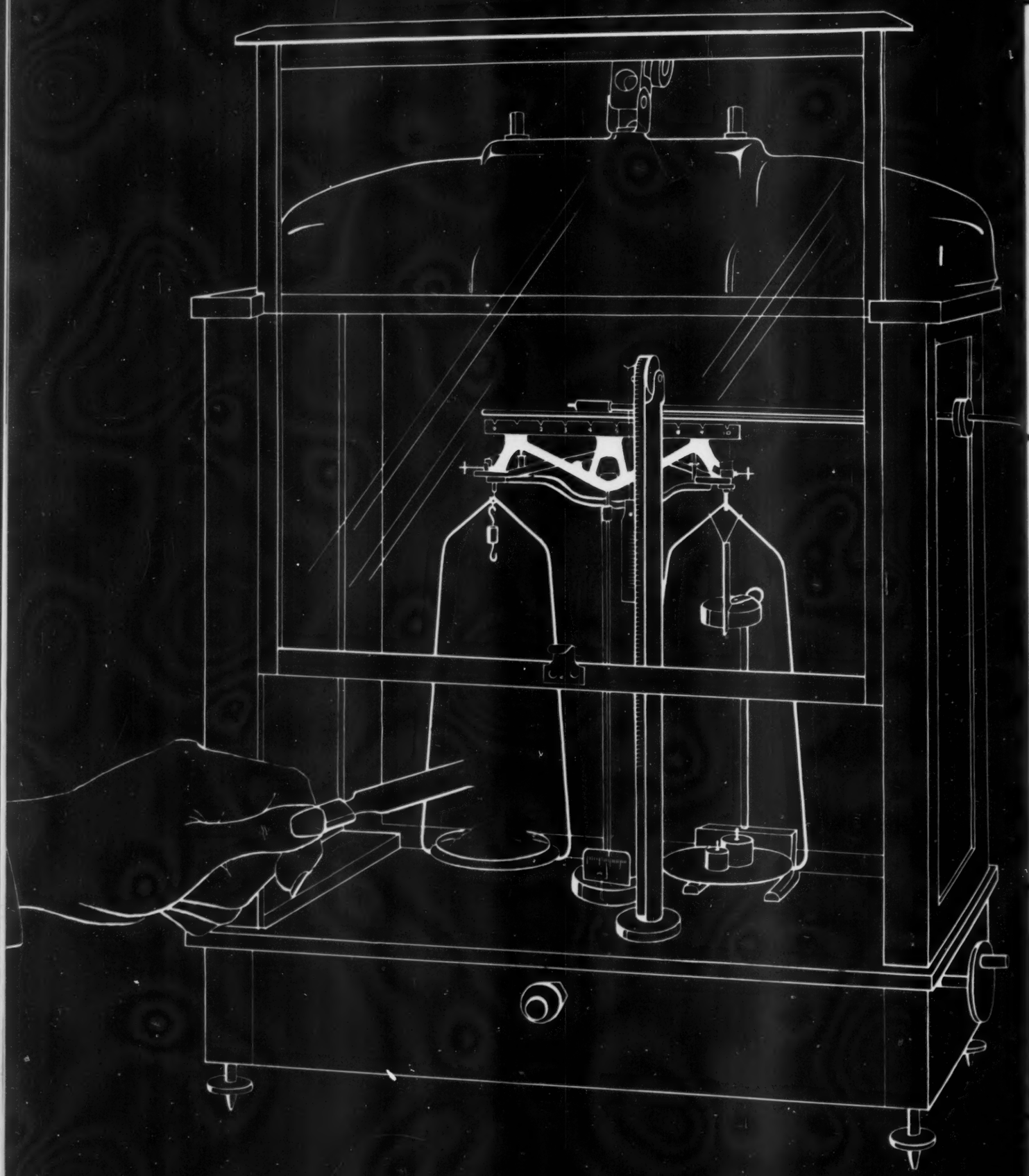

Color strength in IPI inks is evaluated by these ultra-precision balances for better color uniformity

The components in a printing ink formulation, unless properly dispersed, can throw a formula completely out of balance.

Unless the pigment is well dispersed in an ink, random samples from a single batch and successive batches of this ink will vary perceptibly in color strength. This results in low quality printing, imperfect color matches and less mileage.

IPI technicians check pigment dispersion by the use of balances or scales sensitive enough to weigh an eyelash. They can measure ink samples to within one-millionth of an ounce and compare the results against established color standards for each individual ink. Thus, color uniformity of each batch of ink is tested before a shipment leaves one of our factories.

This scientific yardstick is further proof of the emphasis IPI places on quality control. For you, it means high quality inks—and better quality printing.

IPI service at work for you

Printing plants of all sizes are invited to use IPI's complete ink service facilities in printing centers from coast to coast. Each local IPI service station and branch is staffed by local experienced ink men, well-seasoned in the special printing problems of each locality. They are always on call to help you solve any printing problems—large or small—that may arise. For prompt ink service with a personal touch, contact IPI.

IPI and IC are trade-marks of Interchemical Corporation

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PRINTING INK DIVISION • 67 W. 44th ST., NEW YORK 36, N. Y.

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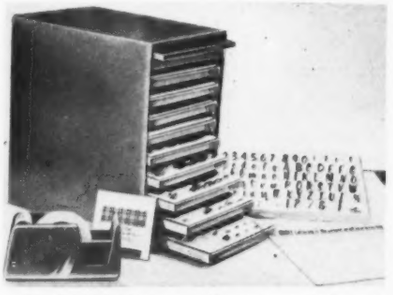
Equipment & Supplies

(Continued from Page 10)

only. The screens are designed to produce photolithographic screen negatives in the process camera directly from original copy, with the magenta used for black and white plus indirect color, and the gray for direct color. The process may also be used for making lithographic screen positives, either in the process camera or in a vacuum printing frame, from continuous tone negatives. For further details, please mention PEE No. 511 in your request.

Photolettering Equipment

Duall Foto Lettering, manufactured by Modi-Graphic Incorporated and designed for copy layout, can be used with the Duall Foto Unit or any other camera where copy may be back lighted. Equipment consists of Duall Foto Letters on either 2 in. film or



on 35 mm. film; double gummed Scotch tape for mounting letters; a set of four ruled assembly boards, two of which are 12 in. by 16 in., and two 8 in. by 12 in., and a 10 tray metal cabinet which is 20 in. high by 12 in. wide, by 17 in. deep. After mounting the letters, the assembly board is back lighted and photographed. The resulting negative is then enlarged or reduced to fit the copy layout. Sponsor states that enlargements from original letters up to ten times the diameter have been made successfully. For further details, please mention PEE No. 523 in your request.

Seven Power Magnifier

The Bausch & Lomb Optical Co. has introduced a seven power measuring magni-

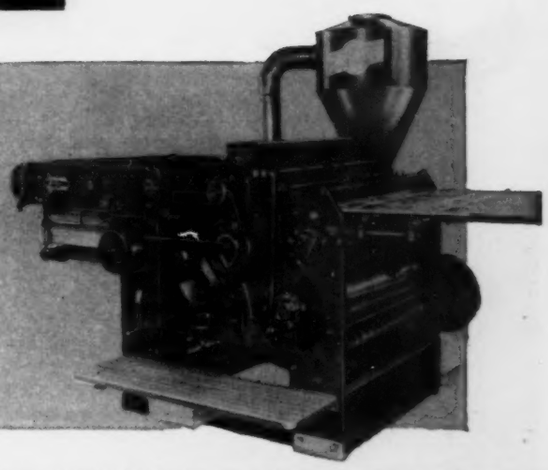
fier for use in the Graphic Arts. Clear plastic sides permit full illumination, states sponsor. Magnifier is equipped with re-

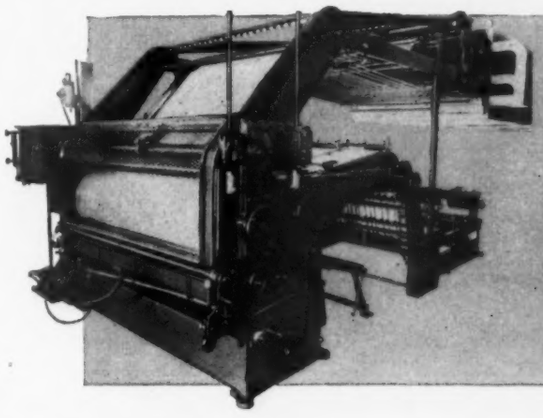
(*Continued on Page 18*)

CHRISTENSEN... for Pressroom Profits

DEXTER

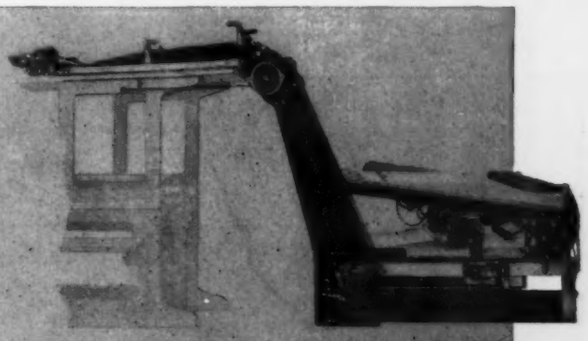
BRONZING Equipment will bring new jobs into your shop . . . and a Christensen High-Speed Bronzer attached to your press will mean increased profit with low operating costs. Matches the practical running speed of your press . . . exhauster-reclaimer keeps bronze out of the pressroom and in the machine.





VARNISHING of labels, magazine covers, circulars and gift wrappings enhances both product appearance and profits. The Christensen Varnishing Machine operates at almost twice the speed of any other present varnisher. Dual-level oven decreases floor space required. The Christensen will handle paper or board in widths up to 78 inches.

STREAM FEEDING with the Christensen Continuous Feeder means no stopping of the press . . . more printed sheets per hour. Improved register because sheets arrive at register position at one-sixth the speed of sheet-by-sheet feeders. Floor loading reduces operator fatigue, reduces loading time, eliminates stairs and platforms.



ILLUSTRATED CIRCULARS ARE AVAILABLE FOR ANY OF THE ABOVE MACHINES

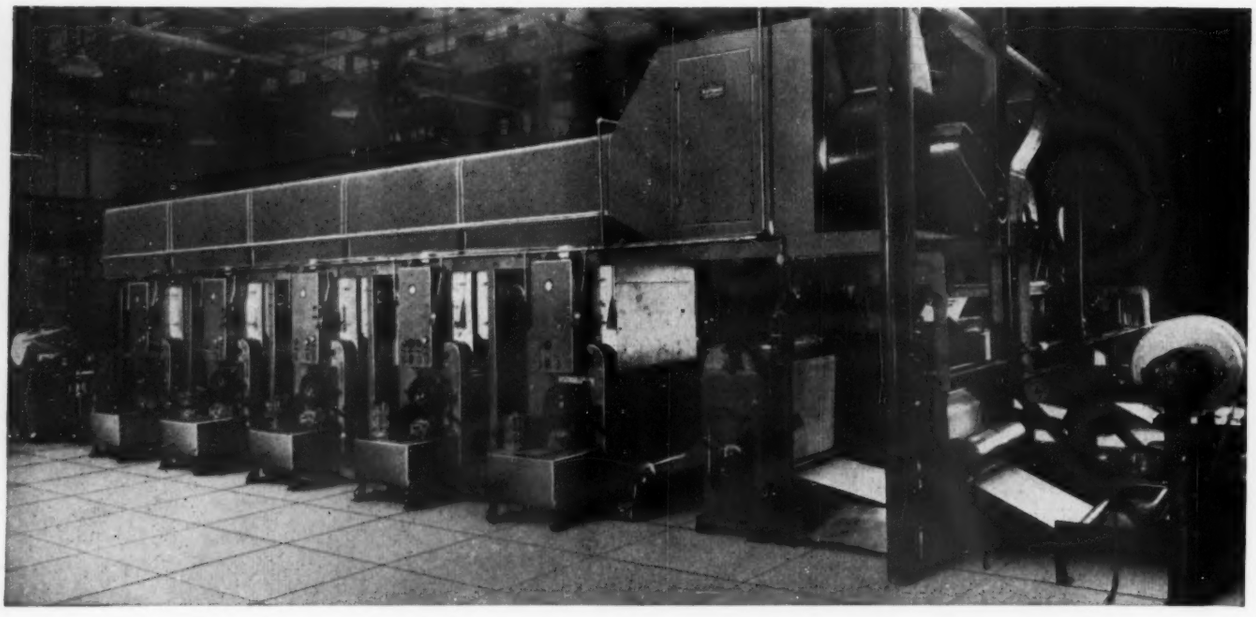
DEXTER FOLDER COMPANY

General Sales Office

330 West 42nd Street New York 36, N. Y.

Staude "1000"

ROTOGRAVURE PRESS



COMPLETE INLINE EQUIPMENT FOR CARTONS . . . WRAPPERS . . . LABELS

- *Designed to run at 1,000 ft. per min....*
- *Integral assembly for fast changeover...*
- *Printing width: 26" to 44"...*
- *Circumference: 23" min.; 46" max....*

Heavy duty design . . . exclusive doctor blade mounting for easy accessibility . . . 360° running register . . . frictionless ball bearings used throughout . . . color units on individual bed plates . . . additional units easily added at any time . . . fast makeready changeover time. These are only a few of the features that add up to more profitable volume for your plant. A Staude representative can show you how you can improve plant efficiency with the "1000".

E. G. Staude MFG. COMPANY, INC.

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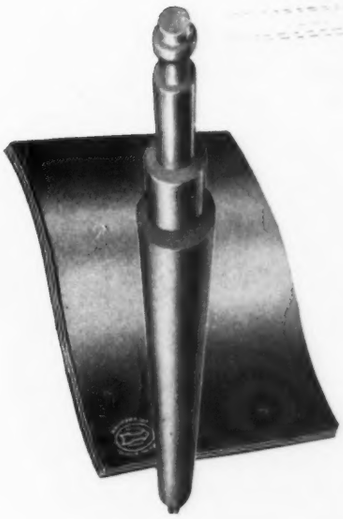
JUMBO VALUE

BECAUSE THEY'RE

JUMBO QUALITY



MERCURY

ROLLERS and BLANKETS

You get true economy in Mercury products, because they give you true money's *worth*. No other roller or blanket made can beat the mileage you get with Mercury.

What is more, these accessories save you money in other ways — by reducing makeready time and wash-up time, cutting down on paper spoilage and above all by delivering the top quality jobs which keep customers coming back for more.

RAPID ROLLER COMPANY

FEDERAL AT 26TH STREET • CHICAGO 16, ILLINOIS

Eastern Office: 800 McCarter Highway, Newark 5, N. J.

Equipment & Supplies

(Continued from Page 14)

movable scales which may be used to measure radii, line thickness, angles and metric distance, lineal, and other dimensions. A metal mounted eyepiece is screwed into instrument barrel, permitting focusing. Magnifier comes in a small plastic storage and carrying case. For further details, please mention PEE No. 527 in your request.

Layout, Stripping and Lineup Table

The Bar-Plate Mfg. Co. has developed its Imperial line of two way layout-stripping-lineup tables. The glass worktop, 36

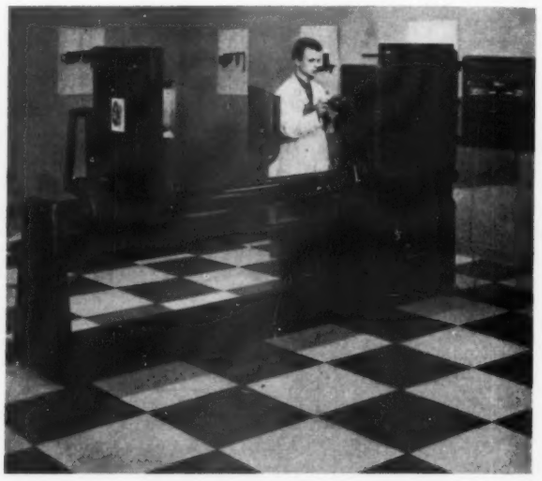
in. from the floor, is illuminated by fluorescent tubes. Six sizes are presently being manufactured, 20 in. by 24 in. up to 62 in. by 84 in. Two stainless steel straightedges, operable by a vernier control mechanism or manually, are positioned at right angles to each other. Movement is facilitated by self-aligning ball bearing pillow blocks. Scales are of stainless steel with 32nds of an inch graduations. Table surface is ¼ in. ground plate glass. The Imperial is of heavy steel construction and table is finished in gray color. The table is provided with a mechanism for tilting from a horizontal position to 30 deg. For further details, please mention PEE No. 508 in your request.

Overprint Varnish

Central Compounding Co. recently developed 20/20 Overprint Varnish which is claimed to be both non-yellowing and scratch resistant. The clear varnish is said to be homogenized to prevent settling out, and is acid and alkali proof. The varnish can be overprinted with ink or varnish on

(Continued on Page 26)

Process Color Accessories—A line of accessories including process color equipment is now available for the 16 in. by 20 in. Robertson darkroom camera, manufactured by Robertson Photo-mechanix, Inc. With addition of equipment, the Model 320 becomes suitable for use with any separation technique, including the simplified three color systems. Equipment available includes a Precision Positive Holder for holding positives and transparencies up to 11 in. by 14 in. and a set of Precision Plate Bars for holding the 11 in. by 14 in. photographic glass plates. A Transparency Opening is part of the equipment for back lighting engineering drawings and tracings for exposure. A Glass Screen Mechanism, consisting of upper and lower screen bars, is for users of glass halftone screens. A calibrated gauge controls separation of the screens. A Manual Flash Lamp to be mounted on the lens case is also available for exposures made through glass halftone screens. Robertson has also developed an adapter back to accept the 8½ in. by 13½ in. Xerography Plate Holder. This adapter is interchangeable with the Vacuum Film Holder and the Precision Plate Bars. A similar adapter permits the use of cut film holders on Robertson 320 cameras. For further details, please mention PEE No. 507 in your request.



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RICHARDS' PRECISION
SAWS • ROUTERS • MORTISERS

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'ELECTROMATIC' SAW TRIMMER
For Stereotypers, Electrotypers, Photoengravers
Code: EST-27x36 Table
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'MULTIFORM' RADIAL ROUTER
For Straightline and Fine Detail Routing
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NEW MODEL
Code: M2-B
ENCLOSED CURVED PLATE ROUTER
with new close coupled single belt drive
Ball bearing construction throughout
Price $1875.00 complete

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RICHARDS COMPANY
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Two gears drive six tons of paper, maintain eyelash alignment
...with help of TIMKEN® bearings

PRECISION is an adjective that is applied in its truest sense in describing the Goss Reel-Tension-Paster. At the installation shown here, the fully automatic paster splices webs at normal running speed of 48,000 newspapers an hour, while the reel handles almost six tons of newsprint in three big rolls.

Turning that big mass of paper puts heavy loads on the machine's gears and worm wheel. So to keep all gears in accurate mesh, Goss mounts them on Timken® tapered roller bearings. It's one of the many fine engineering features of this new machine.

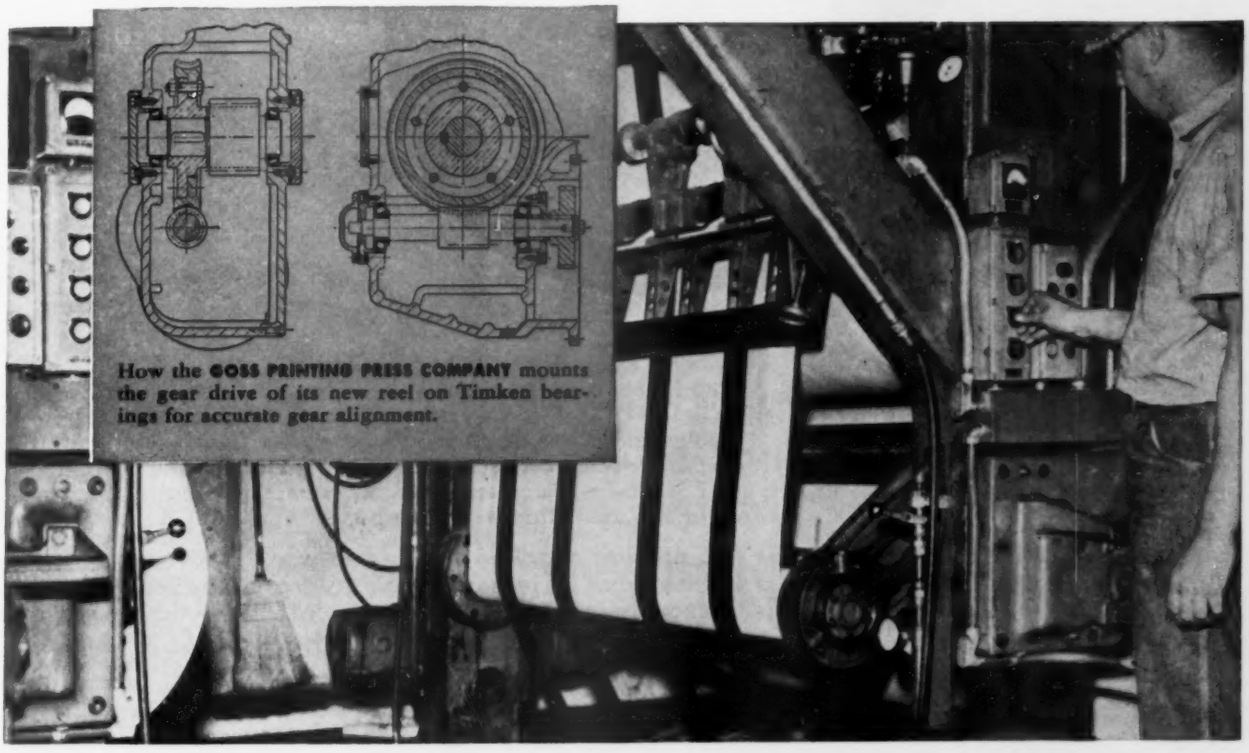
Timken bearings are able to keep these gears in accurate mesh because they carry the load on a full line contact between the rollers and races. And Timken bearings are built to accurate tolerances, help keep the gears in eyelash alignment.

These worm gears put heavy sidewise *thrust* loads on the bearings as well as radial loads. Timken bearings eliminate the need for extra thrust devices because their tapered design enables them to take both radial *and* thrust loads in any combination.

To make bearings of uniformly high quality, we need uniformly high-quality steel. So we make our own steel. It's an important extra step and no other bearing company in the U.S.A. does it.

Timken bearings are a sure sign of quality on the machines you buy, the machines you build. Always look for the trade-mark "Timken". The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ontario. Cable address: "TIMROSCO".

This symbol on a product means its bearings are the best.



How the **GOSS PRINTING PRESS COMPANY** mounts the gear drive of its new reel on Timken bearings for accurate gear alignment.

TIMKEN

TRADE-MARK REG. U. S. PAT. OFF.

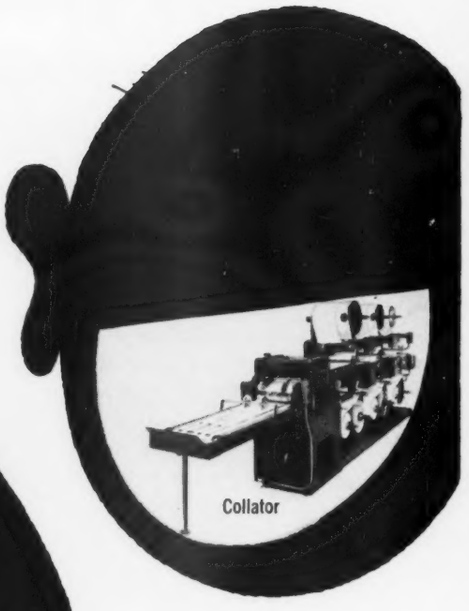
TAPERED ROLLER BEARINGS

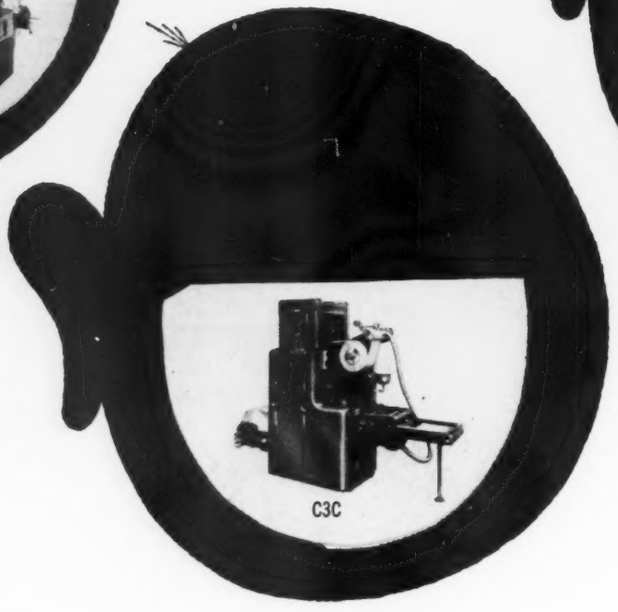
OUR OWN NICKEL-RICH ALLOY STEEL MAKES TIMKEN BEARINGS TOUGHER

Nickel makes steel tougher. And we don't skimp on nickel in the fine alloy steel we make for Timken bearings. Our steel-making specialists use the exact amount to give Timken bearings the toughness they need to withstand shock, last longer. We control the quality of Timken bearings at every step in production—from melt shop through final bearing inspection.

NOT JUST A BALL ○ NOT JUST A ROLLER ▭ THE TIMKEN TAPERED ROLLER ▭ BEARING TAKES RADIAL ↓ AND THRUST →○← LOADS OR ANY COMBINATION ↓→

everybody's
talking about
*Speed-Flex!**





***because**

Speed-Flex

outperforms
other presses
6 to 1!

Even the small Model C3C *Speed-Flex* will print 10 to 15 thousand impressions in 3 colors per hour — sheet size up to 13 x 17 — while the same size conventional job presses produce only 4 to 6 thousand in 1 color.
Counting each color as an impression, the ratio is 6 to 1.
And *Speed-Flex* numbers with cam operated numbering machines, perforates, and attaches carbon paper to the printed sheet.

- **Acquire new *snapout printing* accounts**
- **Build volume for present equipment through added versatility**
- **Change present money-losing jobs into money-making jobs**

WHEN YOU OPERATE PROFITABLE SPEED-FLEX PRESSES!

See *Speed-Flex* presses and accessories in operation in Los Angeles or at our own Chicago or New York offices. Get the *Speed-Flex* profit story at first hand. Or write today for information.

Now! *Speed-Flex* presses are easy to own! They're available to qualified printers on a variety of financing and leasing arrangements. You'll be amazed how economical it is to install one *Speed-Flex* press or modernize your entire plant.

direct inquiries to 5569

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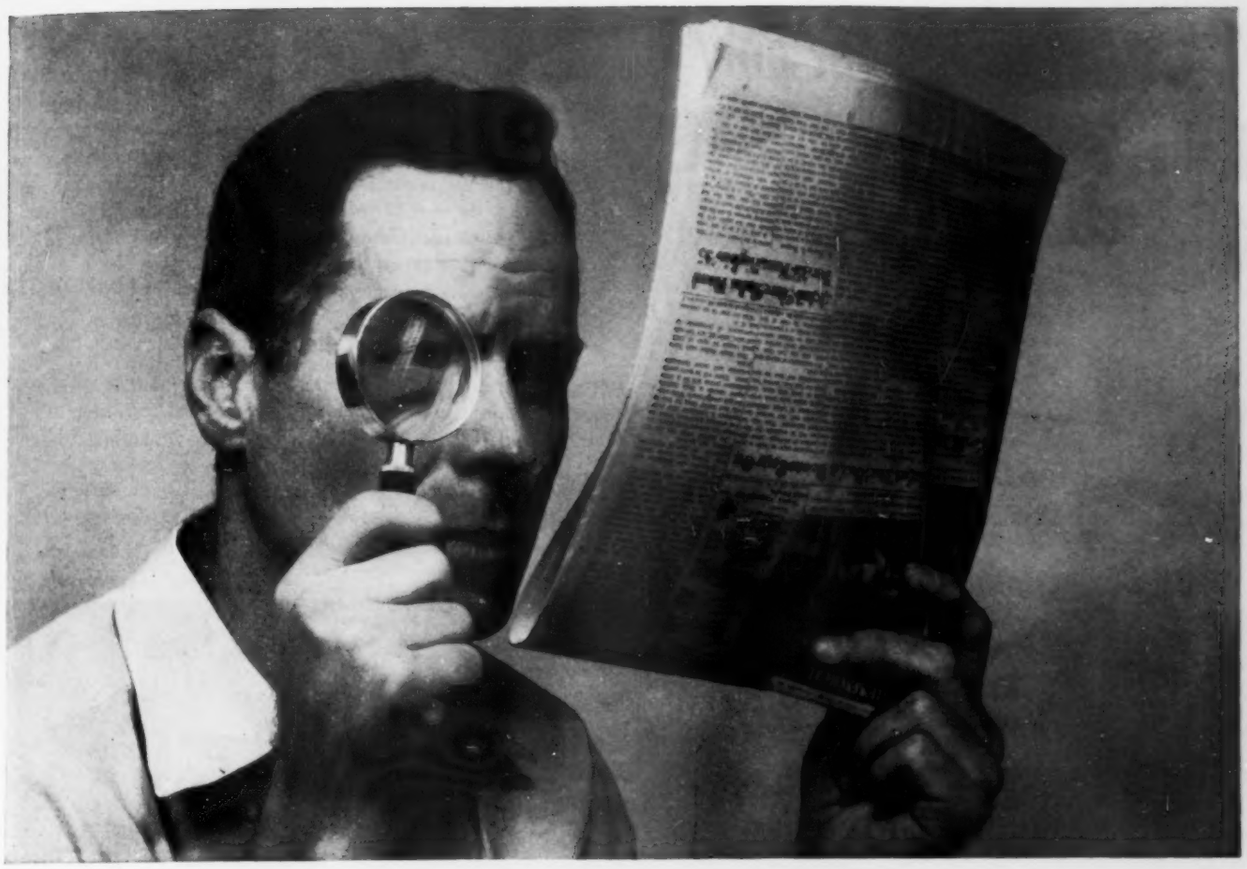

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There's no loss of detail when you print direct from Fairchild SCAN-A-PLATES

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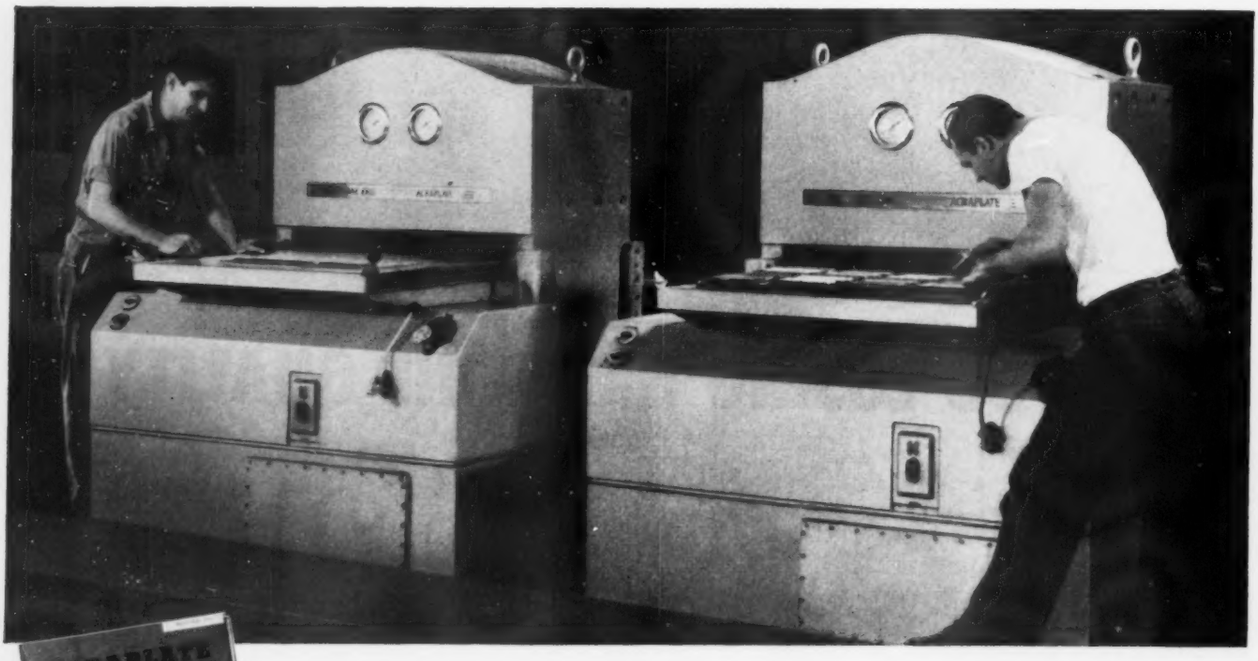
SCAN-A-GRAVER
Electronic Engraving Machines

"We consider only Lake Erie ACRAPLATES when ordering new vulcanizing equipment"

One of the country's largest producers of rubber printing plates and other precision molded products tells why they specify ACRAPLATES exclusively.

The Consolidated Stamp Mfg. Co., with divisions and affiliates throughout the country, can truly speak with the voice of experience. Its main plants in New York, Philadelphia, Chicago and Los Angeles, consuming thousands of pounds of natural and synthetic rubber compounds each week, *have been using Lake Erie* ACRAPLATES *for over 12 years, have 16 units in service.* Listen to what else Consolidated has to say: "Our Lake Erie ACRAPLATES have saved us thousands of dollars in operating costs...have given us extremely high production and a minimum of waste...have produced uniform products of the highest quality."

It's the same story in leading plants everywhere. ACRAPLATE is the overwhelming favorite for molding rubber and plastics. If you want fast...dependable...high quality...low cost production, do as the leaders do and select ACRAPLATE equipment for your plant. Write or call us for any assistance you may need in the selection of equipment for your plant. No obligation.



Two of the six Lake Erie ACRAPLATES in the Consolidated plant at Spring Valley, N. Y. These Model 32 ACRAPLATES have platens measuring 36″x28″ and capacities of 320 tons each. Other models available have pressure capacities ranging from 115 to 550 tons and platens varying in size from 17″x22″ to 36″x44″. There's an ACRAPLATE for every type and size of plant. Write or call us for a recommendation.

Write for Bulletin No. 350 Full information on ACRAPLATE equipment for your plant. Specifications. Accessories. Descriptions. Illustrations.

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General Offices and Plant

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● Leading manufacturer of hydraulic presses—3,500 designs from 5 to 22,000 tons capacity—rubber and plastic plate molding...stereotype molding...plastics molding...laminating...die sinking...die casting...metal working...forging...metal extrusion...wallboard and plywood...rubber vulcanizing...special purpose.

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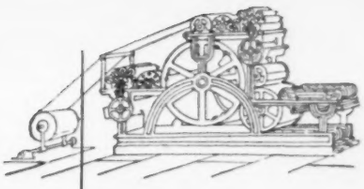
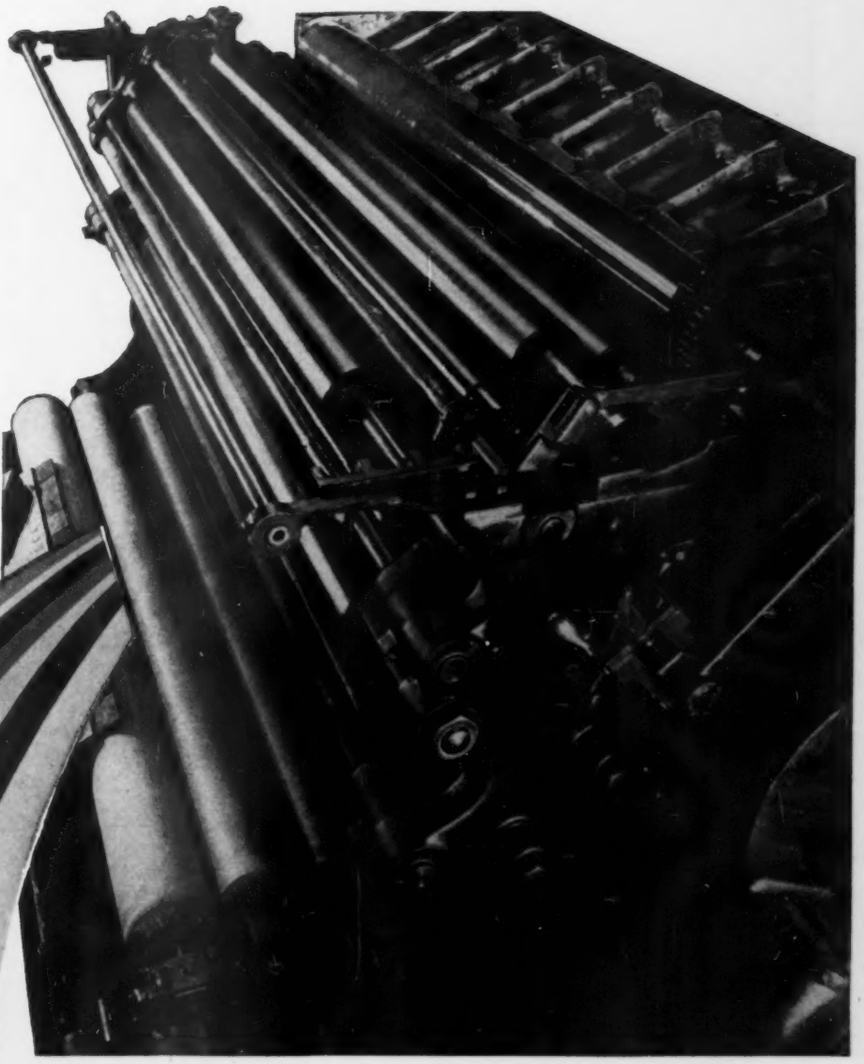


The First is still the 1st



Back in 1847, the first roller factory in America was opened by Sam'l Bingham, and his rollers were so superior to those made by the printers themselves that the demand soon created a thriving new industry—roller making.

Today, after 108 years of roller making, the Sam'l Bingham's Son Mfg. Co. is still first. First in experience. First in research and technical know-how. First with complete regrinding service for rubber rollers. And first in quality—rubber, composition and vulcanized oil rollers.

the Right Roller right away

SAM'L BINGHAM'S SON MFG. CO.
MANUFACTURERS OF
PRINTERS' ROLLERS

Rubber rollers re-ground quickly and accurately in each of our modern factories—

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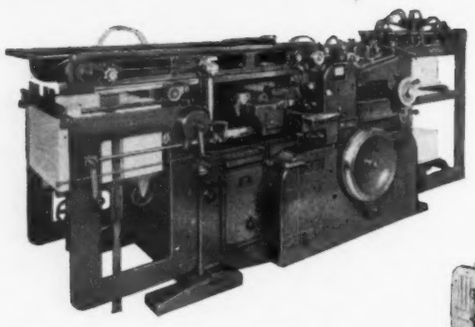
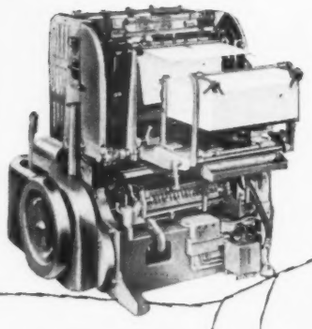
CINCINNATI	DES MOINES	KALAMAZOO	NASHVILLE	SPRINGFIELD, O
	DETROIT	KANSAS CITY	OKLAHOMA CITY	TAMPA, FLA.

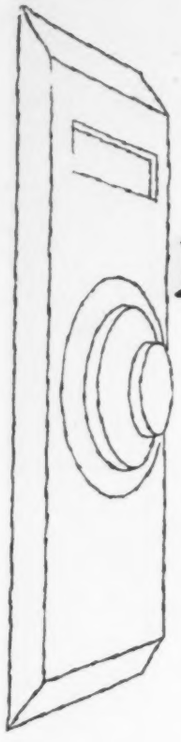
COMPOSITION . . . RUBBER . . . VULCANIZED Oil Rollers

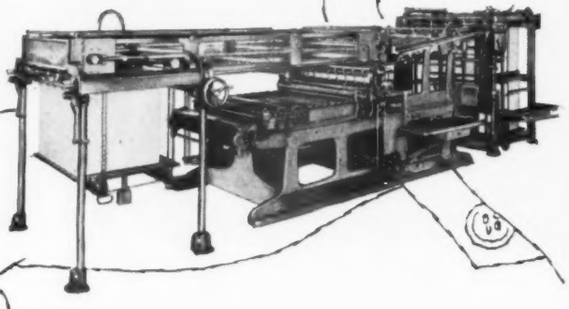


Investigate
Miehle's Outstanding
Letterpress Line

Investigate before you invest!







The Vertical—
Basic press for any plant, large or small.

The 29 Letterpress—
Fully automatic, high speed press quick to changeover, quick to get away.

Single and Two Color Flatbeds—
Standard the world over—wherever fine printing is done at a profit.

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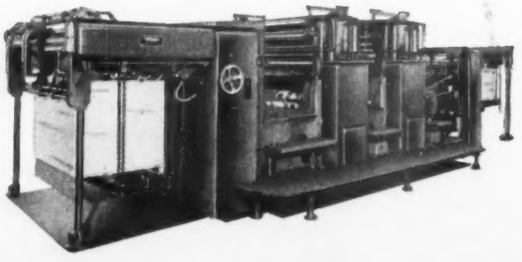
Consistent quality in high speed, curved plate printing.



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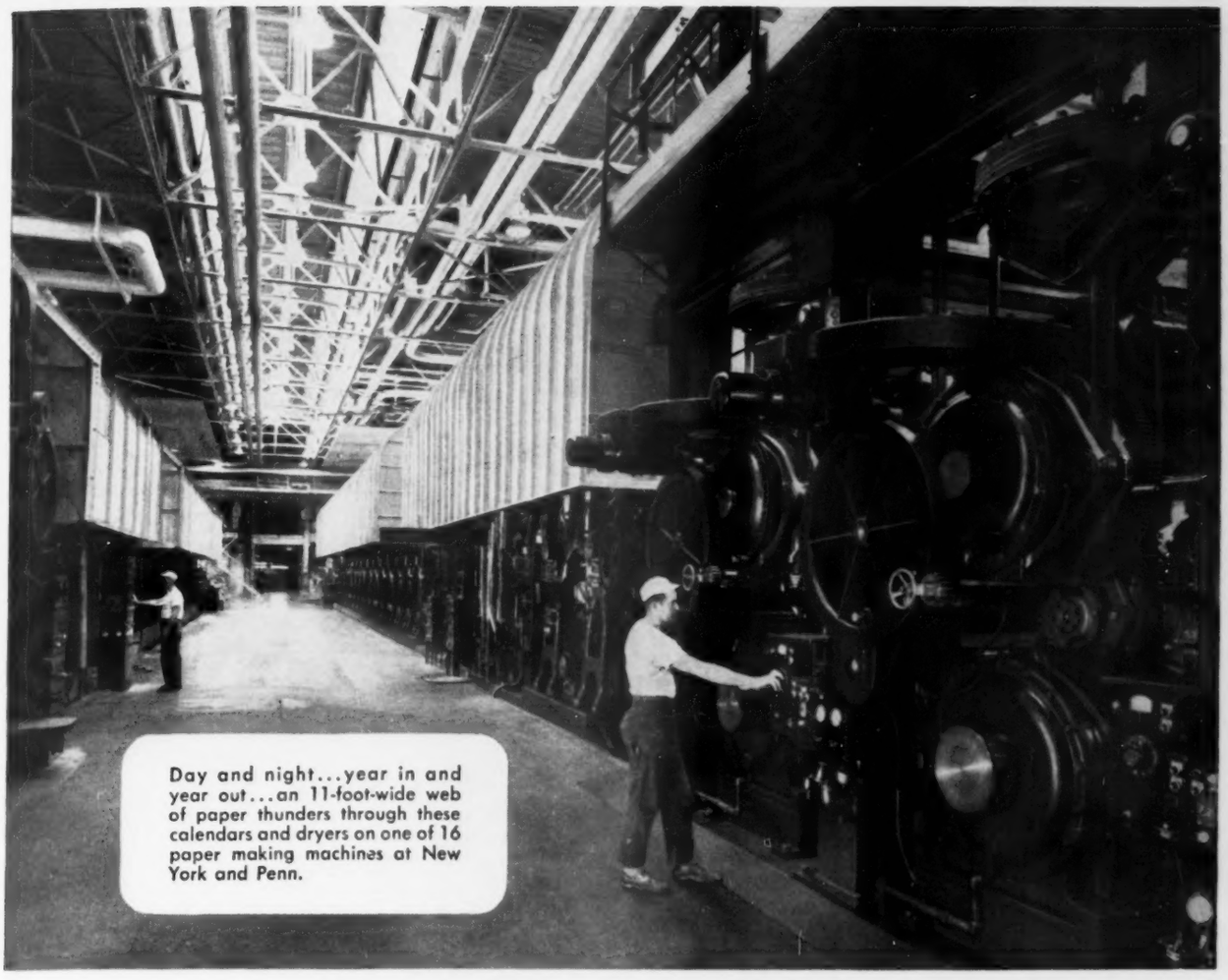
Chicago 8, Illinois

The Miehle

Leader among the world's manufacturers of fine printing equipment.

Press	Sheet Size	Speeds Up To
V-50	14 x 20"	5000
29 Letterpress	22 x 28"	4500
41 Single Color	28 x 41"	3000
46 Single Color	33¼ x 45½"	2800
56 Single Color	42 x 56"	2250
41 Two Color	27¼ x 41"	2800
46 Two Color	32 x 45½"	2500
56 Two Color	38 x 56"	2250
61 One to Five Color*	42 x 60"	6000
76 One to Five Color*	52 x 76"	5500

*The Miehle 61 and 76 Letterpresses are built on the Unit Construction principle and are operable



Day and night...year in and year out...an 11-foot-wide web of paper thunders through these calendars and dryers on one of 16 paper making machines at New York and Penn.

WHERE SAVINGS IN PUBLISHING COSTS BEGIN

Some of the biggest savings in publishing come from choosing the right paper to do the job: a sheet like New York and Penn's Super that is designed specifically for magazine use...that is economical, strong and white...that cuts glare for the reader, works well for the pressman, and has the "feel" of some of America's biggest, most widely-read magazines.

Other savings result from the way Super is made by New York and Penn—from scrupulously careful quality control...from 55 years of continuous manufacture and development on this one grade...and from making more than 160,000 *tons* of Super a year—nearly as much as all the rest of the industry combined.

New York and Penn's Super is not a sheet for everyone. But among America's thousands of magazines, hundreds can use it, profitably. It's met the approval of leading magazines large and small—and of their readers, advertisers, editors and printers as well.

If you know a publisher who would like to reduce his costs, do him a favor. Show him this ad. Then have him ask a merchant for the full story on Super. Or phone MUrray Hill 6-6090 for the name of our nearest distributor. New York & Pennsylvania Co., 230 Park Ave., New York 17. 1721

New York and Penn

Pulp and Paper Manufacturers

Super • English Finish • Eggshell • English Finish Litho • Offset • Music • Bond • Tablet • Duplicator • Mimeograph • Drawing • Imitation Press Board • and other specialty grades

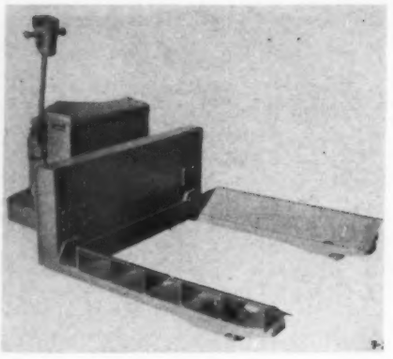
Equipment & Supplies

(Continued from Page 18)

either letterpress or lithographic printing. For further details, please mention PEE No. 514 in your request.

Pallet-Type Roll Handler

The Automatic Transportation Co. announced that it has designed a special pallet-type roll handling unit for 3 T. cylindrical loads with diameters of up to 75 in. The roll handler is an operator-led, electric powered truck equipped with a pair of concave forks, 9 in. wide and 50 in. long, for handling cylindrical loads. An



electric lift mechanism raises the forks 4 in., enabling the truck to pick up the cylindrical loads. The unit can be furnished with different overall fork widths and lengths to accommodate loads of different length and diameter. Capacity of the two standard models available is 4000 lbs. and 6000 lbs For further details, please mention PEE No. 503 in your request.

Line Operated pH Meter

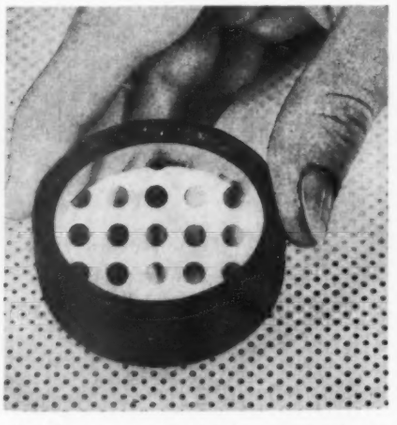
The line operated pH meter model 110, manufactured by Photovolt Corporation, is equipped with an indicating meter mirror of 7 in. scale length with 140 divisions, permitting readings to 0.02 pH unit from 0 to 14, continuous through neutral point without range switching. Power consumption of 10 w., single operating control and a 5 in. shielded Photovolt shielded glass electrode are other features of the meter. The instrument can also be furnished in a portable shape with baseboard and carrying cover. The available accessories include a swing arm adapter for immersing the electrodes by tilting motion and a shielding hood for use of unshielded electrodes. For further details, please mention PEE No. 488 in your request.

Lift Truck System

Roll-N-Stor system, consisting of a lift jack and engaging bracket, in conjunction with semi-live platforms, is offered by The Hamilton Caster & Mfg. Co. The heavy duty platforms, or skid trucks, are available in a range of platform sizes and with three kinds of wheels; all metal, rubber tired or molded plastic. One or more lift jacks can be used in combination with any number of skid trucks. When not in use, the left jacks may be stored in an upright position and the skid trucks can be stacked. For further details, please mention PEE No. 529 in your request.

Five Power Magnifier

The Precision-Vision 5-Power Magnifier, as announced by S. B. Logan & Co., is equipped with a double lens for overcoming



distortion and is highly corrected for spherical aberration. The Precision-Vision is constructed with a light weight aluminum frame, 2 in. diam., ¾ in. in thickness and

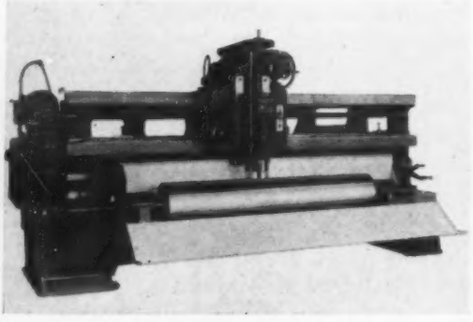
(Continued on Page 34)

27 Years Ago We Hung Out Our Shingle . . .

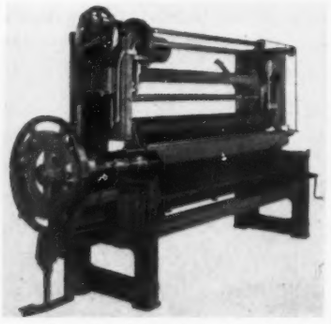
STANDARD PROCESS CORPORATION
Specializing in Rotogravure Equipment

It seems just like yesterday that we hung out our modest shingle proclaiming specialization in rotogravure equipment. In 27 years we have done a world of business and now live in a large, well-equipped factory proving that our customers are satisfied with the equipment and supplies we have furnished. We'd like you to be one of our customers for equipment such as the two pieces shown below.

If it's about gravure equipment, write us.



Grinding and Polishing Machine



Layon or Transfer Machine

STANDARD PROCESS CORPORATION
Manufacturing Gravure Equipment and Supplies
2704 W. Roscoe Street **Chicago 18, Illinois**

"With the latest automatic color register —the Hurletron 'Electric Eye'—ROP color becomes practical and profitable for any size newspaper . . ."*

says ROBERT C. CORLETT, President
Goss Printing Press Company

bed press equipment.

Strong for Color

Bob Corlett is a great believer in run-of-paper color as a valuable adjunct to modern day newspapers. He feels that under present-day competitive conditions, newspapers need a strong national ROP color advertising program to meet the needs of advertisers. With the latest automatic color register —the Hurletron "Electric Eye" —ROP color becomes practical and profitable for any size newspaper, he asserted.

"It is practical because it takes a lot of curse off press registering," he explained, "thus eliminating old-time hazards and headaches connected with maintaining color register."

Better ink and better paper would aid newspapers to make further strides toward high quality printing, using the latest in highspeed letter presses added. "We now offer

a result
periment
improve e
ment.

"Before w
own develop
we depended t
on suggestions
ments that w
by pressroom su
said Mr. Corle
their ideas wer
were not practic
our own researc
with improveme
adapted to ou
on our own en
ence."

Started

Bob Co
year at
Park,
grad

HURLETRON **Automatic Register Control**

FOR ROP COLOR-

IT'S AUTOMATIC . . . set it and forget it

IT'S ACCURATE . . . holds register of all colors within a few thousandths of an inch

IT'S CONSTANT . . . maintains register at all operating speeds

IT'S FAST . . . makes high speed corrections at splices reducing off-register waste

IT'S PROFITABLE . . . as proved in plants of leading dailies

Want details? Write today for our latest booklet . . . no obligation.

ELECTRIC EYE EQUIPMENT COMPANY

1930 EAST FAIRCHILD STREET, DANVILLE, ILLINOIS

Manufacturers of: Hurletron R.O.P. Color Registration Controls; Automatic Controls of Caliper and Weight on Paper and Board; Center Line and Side Web Guide Controls; Cut-Off and Back-Up Controls; Slitter Controls; Moisture Controls.

**Reprinted from an article in Editor & Publisher, April 23.*

LAWSON ANNOUNCES

the result of

8

years of successful pioneering

in

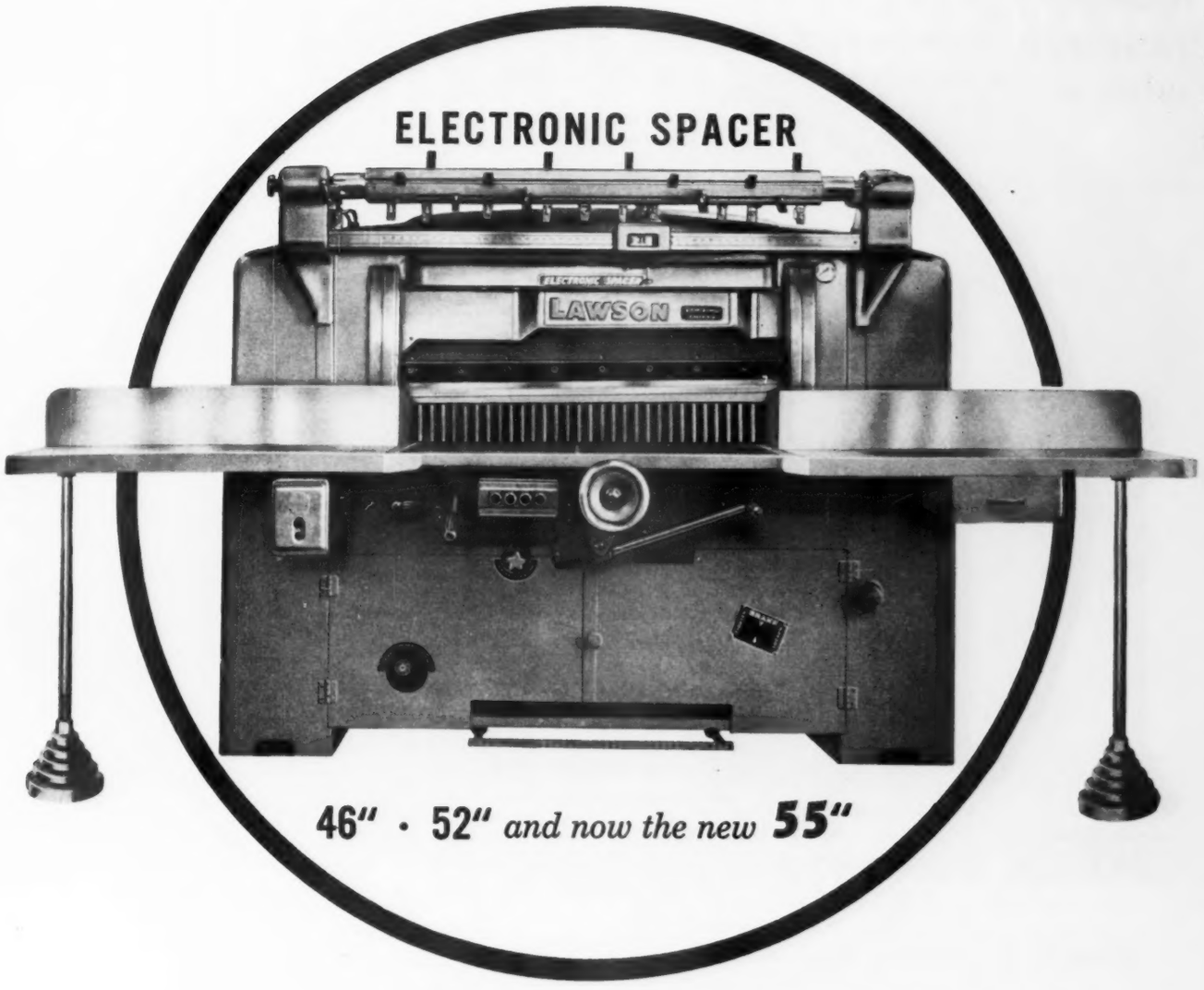
HYDRAULIC CLAMP CUTTERS

The use of hydraulics in paper cutting is not new. In 1947 Lawson introduced the first successful hydraulic clamp paper cutting machine. Experience has proven the merit of this pioneering effort, as evidenced by almost 1000 cutters in daily use in some of America's leading plants; and now of equal importance is the result of a program of continued research and engineering to achieve new heights in accuracy, productivity and performance . . . the "Series V65" Hydraulic Clamp Cutters and Electronic Spacers which represents the ultimate in 46″ — 52″ — 55″ cutters.

LAWSON engineering pioneered as standard equipment such advances as cushion hydraulic clamping, tiptoe hydraulic treadle, 5″ clamp, gears operating in a sealed bath of oil, and other improvements making for speed and accuracy of paper cutting. LAWSON now offers a host of new features: clamping mechanism entirely separate from knife operating unit — clamp pressure remains constant during cutting cycle with no impact action, blow or shock . . . foot treadle applies full clamp pressure as pre-set by the operator . . . oil tank has no internal moving parts . . . there are 18 other new features worthy of your attention.

Also, many new features have been added to the Lawson Electronic Spacer including:
Completely automatic . . . after the last cut the back gauge automatically returns to the first cutting position . . . when the clamp is held down the back gauge will not move forward until treadle is released . . .hexagonal spacer bar can be rotated from any position . . . and others.

...THE NEW V-65 SERIES



Lawson pioneered the standardization of its paper cutting machines. This gives users the assurance that Lawson Cutters will meet not only immediate, but also future cutting requirements. When a Motor Operated Back Gauge or Lawson Electronic Spacer is needed to handle additional work, there is no need to trade out the cutter. These additions can be readily applied to present Lawson equipment, right in the customer's plant.

Write for descriptive folder.

E. P. LAWSON CO., inc.

MAIN OFFICE: 426 WEST 33rd ST., NEW YORK 1, N. Y.

CHICAGO
628 SO. DEARBORN ST.

PHILADELPHIA
BOURSE BUILDING

BOSTON
176 FEDERAL ST.

the world is so full of a number of things...

that are numbered better with a WETTER ROTARY NUMBERING MACHINE!

Right-Angle Rotary Machine

a WETTER Rotary gives you plenty of SAS* —always!

This curved-faced rotary machine is built to imprint numbers at right angles to the axis of the impression cylinder. Note barrel-shape of number wheels. Cam-actuated—heavy duty construction assures accurate, clean numbers even at highest press speeds. Available in Roman or Gothic style figures.

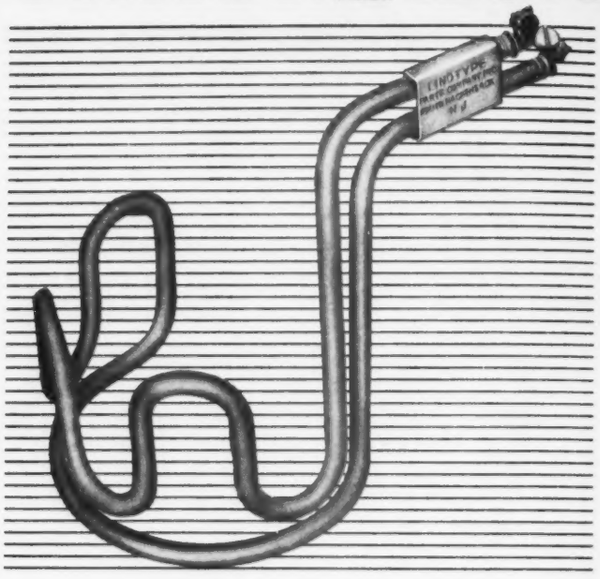
***SPEED** — keeps pace with the fastest rotaries.*
***ACCURACY** — in numbering sequences — in alignment of figures.*
***SHARPNESS** — in impressions.*

Write for free descriptive folder today.

1641

WETTER NUMBERING MACHINE CO.
ATLANTIC AVENUE & LOGAN STREET · BROOKLYN 8, N.Y.
ONLY UNION MADE NUMBERING MACHINE IN U.S.A.

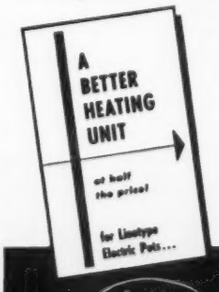
STAR CHROMALOX



A BETTER HEATING UNIT

FOR HALF THE COST!

The new CHROMALOX tubular type heating unit, designed for Linotype Electric Pots permits better product control. While the cost is only half, CHROMALOX will give more heat, outlast and consume less space than the conventional type heaters. Replaces the *two* heaters . . . part numbers F 3071 and F 3072 or F 6956 and F 6597. Specify STAR parts number M-45, and voltage.



Write, today for further information about this reliable, compact, efficient heating unit.

Precision TRADE ★ MARK Parts

BRANCH 1327 BROADWAY, KANSAS CITY, MO
AGENCIES CHICAGO • MINNEAPOLIS
LOS ANGELES • DENVER • BOSTON
CANADA SEARS LTD and Agents Overseas

LINOTYPE PARTS *Company, inc.*
SOUTH HACKENSACK, N. J.

OXY-DRY THEORY

is to *electronically bond* micron sized (graded as to size) particles of starch powder to a printed sheet just before it reaches the delivery rack. Each particle holds the printed surface away from the back of the next sheet so as to prevent ink offset, permit drying of ink, and provide "plumb-bob" jogging of sheets.

OXY-DRY OPERATION

provides the *controllable* mechanical method of depositing the minimum amount of the correct powder formula required on the sheet in such a way as to eliminate excess spreading of powder on press equipment and irregular spreading on the sheet. In addition, OXY-DRY removes the static-electricity from sheets so that they jog and handle perfectly without sticking in subsequent production of printing and processing.

OXY-DRY PRECISION ENGINEERING

represents the ultimate in the only exact machinery that can carry out the theory and operation of perfect ink offset prevention. From installation through operation every OXY-DRY Sprayer screw, bolt and part is *precision engineered* to do a precision job on almost every known printing press in existence. To those printers who want to increase the *saleable number of impressions per hour of production time for their entire plant (paper, board or film)* this means we can cost estimate and install the only *right* ink offset prevention process . . . from parts and assemblies specifically precision engineered to do a precision job on each press . . . equipment that will run longer and better.

The press name, model number and maximum sheet size sent to us will start you on your way to getting the tremendous competitive advantage of OXY-DRY, the only right ink offset prevention process. Or, our new catalog contains more complete information that will help you decide.

THE ONLY *RIGHT* INK OFFSET PREVENTION PROCESS

OXY-DRY

NEW YORK • CHICAGO • SAN FRANCISCO

320 S. Marshfield Avenue, Dept. PE Chicago 12, Illinois

WHY DO IT THE HARD WAY?

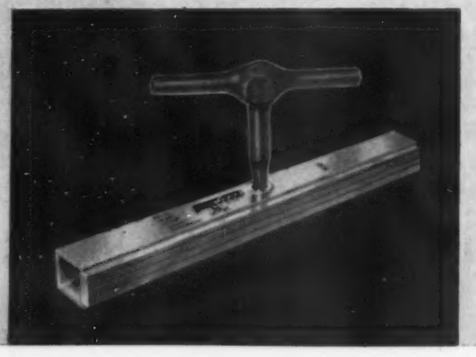
win the race against time — with CHALLENGE HI-SPEED QUOINS!

It's no picnic to be handicapped with old-fashioned equipment. That's why smart printers everywhere are turning to Challenge and the jet-swift efficiency of Hi-Speed Quoins!

Challenge Hi-Speed Quoins reduce lock-up time by as much as 80%. One quoin . . . one key — the equivalent of 5 . . . 6 . . . yes, even 8 standard quoins. And one quick twist — and that's it! No hunting for parts. No reglets. No work-ups.

Challenge Hi-Speed Quoins are made of the finest, rust-proof, plated steel to give years of hard service. In 7 sizes to meet all requirements.

Ask your dealer for a demonstration or write Challenge for full details.



THE CHALLENGE MACHINERY CO.

Office, Factories and Showroom:
Grand Haven, Mich.

DEALERS IN ALL PRINCIPAL CITIES

Challenge ® TRADE MARK

787

"Doing easily what others find difficult is Talent . . ."
Amiel.

The Quality organization is geared to efficiency in every operation—in every department. Its plates must be clear, sharp, in accurate register . . . to maintain traditional Quality Leadership so widely recognized.

Quality *Pre-makeready* plates are more durable and actually *cost less* for long runs. They are made for flat bed and all rotary presses in use today including the most recent models of Claybourn, Cottrell, Miehle, Harris Seybold, Sterling, Western Printing rotary attachment for two-color Miehles. Production costs are cut substantially with *precision pre-makeready* on runs for national trade-marked folding cartons.

Raise your standards *and better secure* your business by insisting on Quality Electrotypes to really *know* how important quality plates are—how economical they prove to be.

There is no room for shoddy off-register carton or label printing today. It reflects discredit on the customer and his product.

Really accurate *precise* registration requires real craftsmanship—Quality Precision Electrotypes.

They insure "on-the-dot" dimensions, pre-makeready fineness that only skilled men and the most modern machinery make possible.

The leaders in your industry have insisted upon them for years because ordinary plates can't possibly compete with them.

Write for valuable information which insures economy. There's no obligation.

- Lead Mold
- Nickeltypes
- Plastic Mold
- Copper Electros
- Tenaplate
- Chromium Plates
- Bishop-Stansell Treating (Pre-Makeready)

Flat or curved for all letterpress printing purposes

Positive Register Non-Stretch Curves

THE QUALITY ENGRAVING & ELECTROTYPE CO.
436 COMMERCIAL SQUARE
CINCINNATI 2, OHIO

Printed in U. S. A. from Quality Electrotypes

Certifieds guard his vacation peace

Plant responsibilities rest lightly on the production executive whose vacation peace is safeguarded by Certified Mats . . . His confidence in crew members now carrying on is supplemented by the thought that stereo jams just haven't happened since the lucky day they changed to Certifieds.

For dependable stereotyping, rely on Certified Mats

Certified DRY MATS

CERTIFIED DRY MAT CORPORATION, 555 Fifth Avenue, Dept. M, New York 17, N. Y.

"CAPCO" REWINDER

- Rolls lifted from the bottom by hydraulic lifts. No overhead lift.
- Low splicing table at operator's side for easy accessibility.
- No shafts, no chucks with input and output roll center close to floor to minimize lifting and lowering.
- Slitter cuts damaged paper from full roll to ¾ size or ¾ to ½ size saving up to 75% of damaged roll.
- Rolls, out of round, can be rewound thereby increasing production by not having to slow press to accommodate jumping roll.

Get further particulars from

CAPITAL TOOL & MANUFACTURING CO.

5000 Calvert Rd. • College Park, Md. • Union 4-7677

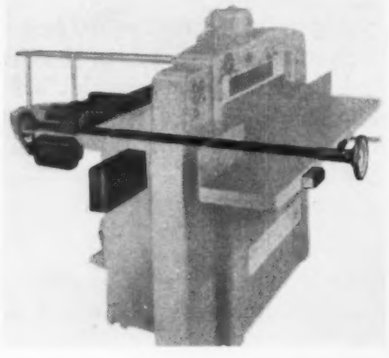
Equipment & Supplies

(Continued from Page 26)

is equipped with two optical ground, 1⅞ in. lenses, in a dustproof mounting. Five time magnification of curved, round or straight-line subjects can be obtained with the instrument. Finish is in black crinkle. For further details, please mention PEE No. 515 in your request.

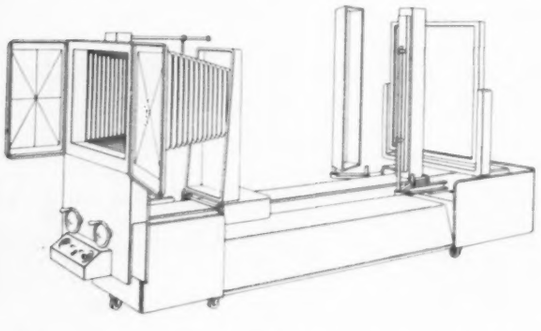
Power Back Gauge

A power driven back gauge is now provided by Chandler & Price as optional equipment for the C&P 37 in. Automatic Paper Cutter. The gauge, which lessens number of operator motions, is equipped



with front and rear limit switches for control of travel. Back gauge is powered by a reversing type motor and automatically returns to back position after a cut is made. All controls are from a push button station located at the front of the machine. Precise setting of the back gauge is obtained by turning the hand wheel at the front of the machine. The wheel is equipped with an illuminated large diameter micrometer gauge, graduated in 64ths of an inch. All

(*Continued on Page 38*)



Wesel Camera Distributor—Tom Darling, president of the Darling-Payne Corp., announced his company's appointment as distributor of the Wesel 25 Camera. This camera, manufactured by Wesel Manufacturing Company, was designed specifically for offset and silk screen plants. The camera is specified as a horizontal camera of lathe-type monorail design. It is equipped with a 30 in. by 40 in. copyboard with a 25 in. by 25 in. vacuum back and is designed for darkroom use. Lights, lens and instruction book are included with the camera. The Wesel 25 occupies a 12 ft. bed. For further details, please mention PEE No. 518 in your request.

→ → → →

SOLD BY

Western Newspaper Union

E. C. Palmer & Co.

Harry W. Brintnall Co.

Turn WALKING Time Into WORKING Time

with MORRISON SAW TRIMMERS

MORRISON 3-A SAW TRIMMER

Today's fastest, most versatile, safest, most accurate Saw Trimmer! Features include: "Behind the Gauge" Workholder, 135-pica Extension Gauge, Miter and Line-up Gauge, Any-Angle Gauge, Saw Grinder, and many others. One of FOUR Standard Models.

Other Morrison Equipment Includes:

Slug Strippers, Plate Bevelers, Router and Type High Planers. Write for catalog.

Symbol of Operating Economy

THE MORRISON COMPANY MILWAUKEE WIS.

THE *Morrison* COMPANY

PRECISION MACHINES FOR THE GRAPHIC ARTS INDUSTRY

125 W. Melvina Street, Milwaukee 12, Wisconsin

SOUTH CAROLINA'S
LARGEST NEWSPAPERS
CHOOSE HEADLINER®

The Sunny South is glowing more than ever because of spreading prosperity, which is nowhere more evident than in South Carolina. Industrial valuation in the Palmetto State has increased sixfold in the last 10 years, while incomes and retail trade have kept pace.

The State and *The Columbia Record* — South Carolina's largest newspapers, in the state's largest market — are growing rapidly with the expanding New South. Dominating one-third of the state, they have a combined daily circulation of more than 110,000 and a Sunday circulation exceeding 87,000.

In keeping with their growth, *The State* and *The Columbia Record* have moved into a $1,500,000 marble and limestone building having three acres of floor space, one of the most distinctive publishing plants in the entire country.

The State and *The Columbia Record* recently began printing on the largest newspaper press ever installed in South Carolina — eight HEADLINER units with Tension Plate Lockup, color Half-Deck, balloon former Uniflow folder delivering papers with folded-edge forward, and Goss Reels-Tensions-Pasters. There is a visitors gallery in the spacious, gleaming tiled pressroom so that everyone may see the dependable, smooth efficient performance of the HEADLINER, which assures that *The State* and *The Columbia Record* will continue to add circulation while offering local and national advertisers the finest full ROP color and black printing.

THE GOSS PRINTING PRESS CO.

5601 West 31st Street, Chicago 50, Illinois

WORLD'S LARGEST MANUFACTURER OF NEWSPAPER, MAGAZINE AND ROTOGRAVURE PRESSES

Thanks to Strong

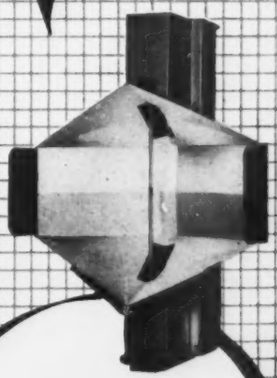
engineering you can now

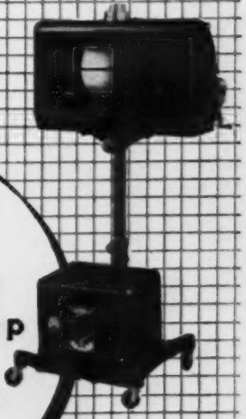
cut plate-making

exposure time in half!

Strong GRAFARC ARC LAMPS

UNIFORM COVERAGE OF LARGE AREAS.
CONSTANT COLOR TEMPERATURES.
POWER TO PUNCH THROUGH DENSE KODACHROMES.
ACCURATE CONTROL OF DENSITIES,
REGARDLESS OF LINE VOLTAGE VARIATIONS.
SHARPER REPRODUCTION.
ELIMINATE ILLUMINATION VARIABLES.
ELIMINATE DOT UNDERCUTTING.





Fully Automatic
High Intensity

Grafarc
140 Ampere
Printing Lamp
For use with
vertical printing frames
40" x 50" and larger.

Challenger
Camera Arc Lamp
Vertical trim;
75 amperes;
23 volt.

Grafarc
95 Ampere
Printing Lamp
For use with
vertical printing frames
under 40" x 50"

Overhead model printing lamps available for use with horizontal printing frames. Burn in normal position, avoiding smoking of reflector and preventing ash from depositing on surfaces in the light path. Models for Monotype Huebner MH photo composing machines assure precise control of intensity for accurate repeats.

THE STRONG ELECTRIC CORPORATION
307 CITY PARK AVENUE • TOLEDO 2, OHIO
Please send free literature on Strong Grafarc Lamps.

NAME _____
FIRM _____
STREET _____
CITY & STATE _____
NAME OF SUPPLIER _____

A SUBSIDIARY OF GENERAL PRECISION EQUIPMENT CORPORATION

Another boost from Hamilton toward higher Composing Room Profits!

Proof and specimen cabinets for safe, clean, convenient storage

Protect valuable artwork and proofs, save time locating mats, make well-organized use of floor and storage space . . . and you'll naturally increase composing room efficiency to cut operating costs. That's why all-steel proof and specimen cabinets are highly rated members of the Hamilton storage cabinet family.

Drawers hold materials flat, walled away from damage by heavy steel yet easily accessible. A black canvas cover fastens completely over each drawer to keep out dust. Drawers run smoothly on rollers, are removable but protected from accidental pull-outs by safety stops. Furthermore, these five- and three-drawer units can interlock to build storage upward on the same floor area.

There's sense and profit in providing such efficient long-term protection for mats, proofs, negatives, etc. Get the whole story from your Hamilton dealer soon.

Five-Drawer Proof and Specimen Cabinet No. 1032 — 46¹³⁄₁₆" wide x 35½" deep x 15⅜" high. Hamilton Three-Drawer unit (No. 1232) also available, can be interlocked with Five-Drawer (using flat cap and base) to increase storage space without adding floor space.

Also by Hamilton: outstanding type cabinets, imposing tables, newspaper tables, ad assembly cabinets, galley cabinets, chase racks, work benches, trucks, miscellaneous units and accessories of many kinds.

Hamilton
PRINTERS EQUIPMENT

HAMILTON MANUFACTURING COMPANY • Two Rivers, Wisconsin

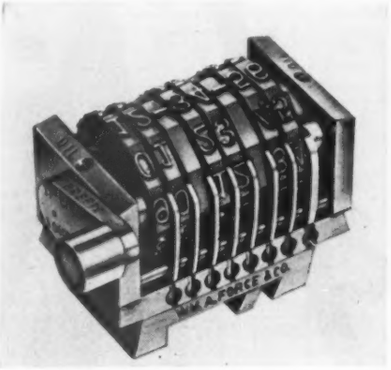
Equipment & Supplies

(Continued from Page 34)

installations of gauges in the C&P Paper Cutter are made at the factory. For further details, please mention PEE No. 528 in your request.

Rotary Press Numbering Machine

A model of its DU Rotary Numbering Machine, designed especially for terminal digit indexing of printed forms, has been



announced by William A. Force & Co., Inc. The machines, assembled to order, are for use on all makes of rotary presses. Terminal digit indexing is convenient for filing, such as for insurance forms and the like. Groups of two, in a series of six numbers, each stand for a division of the filing system. Gaps in the numbering sequence do not affect the system, which will hold a million folders. For further details, please mention PEE No. 531 in your request.

Cormac Book Printer

The Cormac Book Printer photocopies pages of any bound book in about 20 sec. says the manufacturer of the unit, Cormac Industries, Inc. The Book Printer weighs

about 20 lbs. and measures 22 in. by 12 in. by 10 in. Single-sheet copies, 11 in. by 17 in., can be produced. The book page is covered with a sheet of photo-sensitive

(*Continued on Page 88*)

FOR

THOSE

SPECIAL

JOBS...

ANSCO REPROLITH ORTHO TYPE B THIN BASE FILM

It's coated on a low-shrink safety base only .0035" thick—ideal for half-tone positives, overlays, strip-ins and all kinds of lateral reversals.

These outstandingly useful physical characteristics are matched by equally useful photographic properties—full orthochromatic sensitivity . . . high speed . . . wide developing latitude . . . clarity in white areas . . . fine dot etching qualities . . . and steep gradation.

Keep a good supply of Ansco Reprolith Ortho Type B Thin Base Film at all times!

FOR FINEST RESULTS... USE ANSCO REPRODOL, the fast-working developer that yields maximum density and high contrast. Laboratory packaged for your convenience.

Ansco

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The "why-reasons," the man-down-the-street-with-a-Hamilton is out in front, speak for themselves:

1. He uses rubber plate, flexograph, or wet or dry offset printing at the highest speeds in the industry!

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3. He has the speediest make-ready and set-up adjustments obtainable!

4. He has the most reliable web tension and register control available!

5. He has a rugged machine requiring negligible maintenance care!

6. He has virtually uninterrupted production!

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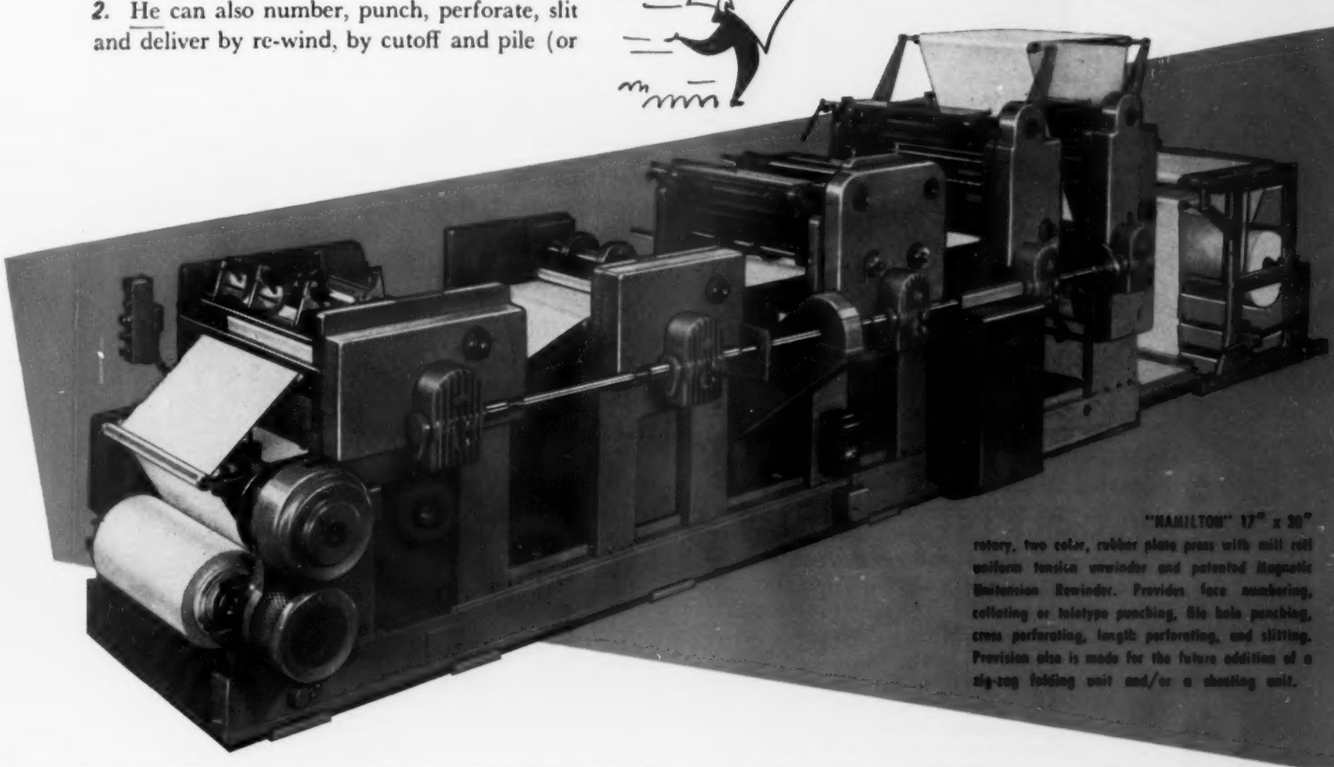

"HAMILTON" 17" x 22" rotary, two color, rubber plate press with mill roll uniform tension unwinder and patented Magnetic Unitension Rewinder. Provides face numbering, collating or linotype punching, file hole punching, cross perforating, length perforating, and slitting. Provision also is made for the future addition of a zig-zag folding unit and/or a sheeting unit.

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"Ownership of a "Hamilton" has removed all apprehension of competitive bids."

Yes, having a HAMILTON in the plant is like having fuel-for-the-furnace and money-in-the-bank. You have the comfortable assurance that no job, large or small, will pass you by because of price, quality, or delivery. Don't envy the man-down-the-street-with-a-HAMILTON. Be the man down the street. Own a HAMILTON!

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the new Champlain photoelectric REGISTRON

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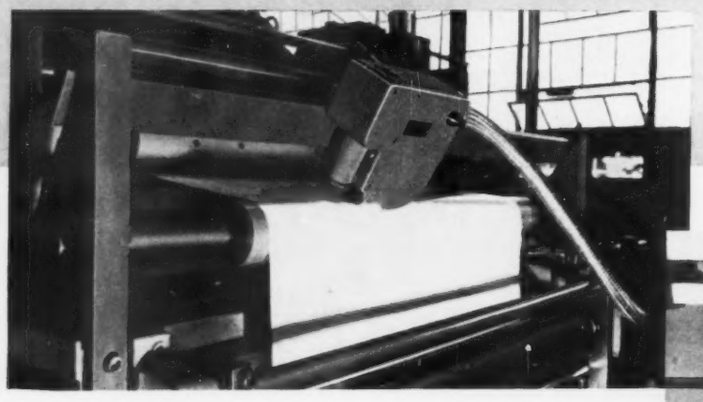

The web scanner monitors the web, predicts an off-register condition before the cylinder is reached.

Remote master control panel at delivery end of a Champlain 8-color, 36" rotogravure press. All registration is controlled from this point.

Developed, perfected and manufactured by one of the oldest, most reliable builders of rotary presses and auxiliary equipment, the Champlain REGISTRON assures constant printing accuracy with minimum handling. Not only printing but cutting and blanking operations too can be kept in perfect register – protecting you against unnecessary stock losses – providing unerring electronic supervision regardless of web speed. And this pinpoint control can be achieved from a single central point with a minimum of adjustments.

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Champlain's Electronics Department is staffed with able and experienced engineers – men thoroughly familiar with the development and application of special electronic equipment in printing and packaging operations. Look to Champlain for engineering planning assistance, for all press requirements, and for such auxiliary equipment as sheeters, cutters–creasers, dryers, special fabricating machinery and electronic controls.

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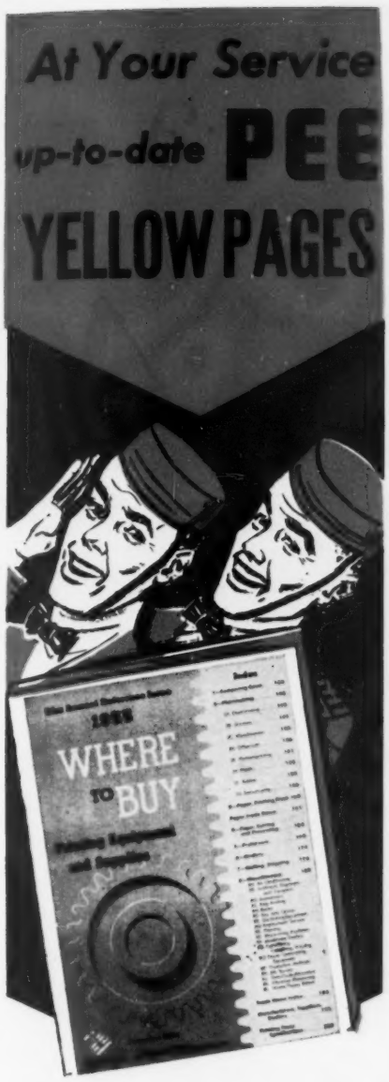

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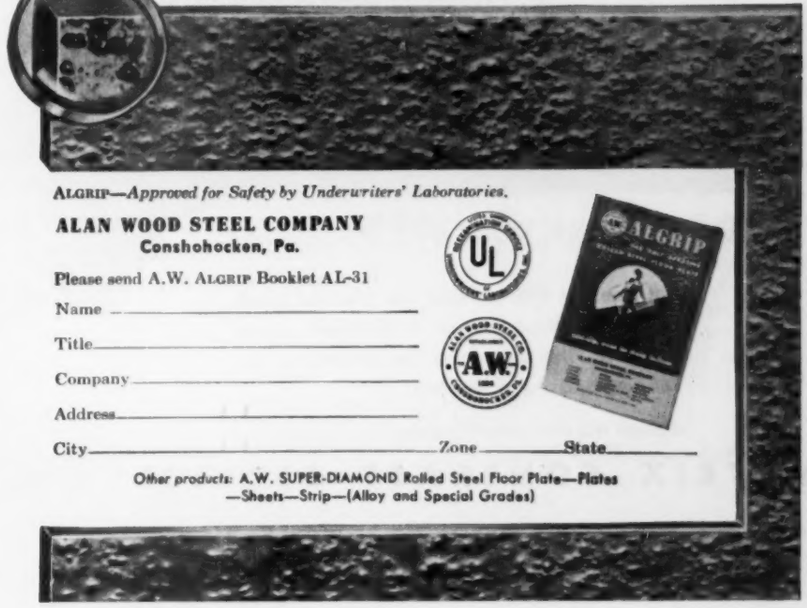

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Your Camera— Getting the Most Out of It

By BERNARD R. HALPERN*

*Photomechanical Consultant, Swarthmore, Pa. Abstract of address delivered before the Washington (D.C.) Litho Club, February 1955.

A CAMERA is a unit of equipment designed to photographically reproduce on wetplate, dryplate, or film, an image of an original drawing, photograph, type impression, transparency, or objects, to the degree of accuracy of definition and geometrical proportions necessary for the class of work for which it is intended. Cameras, therefore, can range in acceptability from a simple grouping of components suitable for office duplicating work to equipment built to the highest order of accuracy as is essential for maps, charts and templets. In between are a variety of standards and variations to accord with the requirements for the various fields of application.

Camera Accuracy

Accuracy, then, is an important word in our specification. What is the criteria of a camera's accuracy? Let us study this, step by step, as we analyze the camera components.

Our first thoughts usually are directed to the *lens*. We all recognize that a good lens is essential, yet in many instances the lens is of a higher order of accuracy than the camera on which it is used. In addition a thorough lens discussion is a subject in itself and it is my intention to concentrate on the mechanical aspects of the camera.

Confining ourselves to the camera then, its accuracy is conditioned by its design, construction, and manufacturing tolerances. This is not as simple as it seems, for straight rails by themselves may bow badly under the weight of the lens and copyboard carriages if the substructure is inadequate. Similarly the displacement of other masses such as swinging a vacuum back, or sliding a screen carriage may induce a shift of image because of structural distortion. A small variation with a short based carriage will be multiplied several times on large copy. All of these conditions have a direct bearing on photographic image fidelity, as much so as the accuracy of the focusing system itself also determines the quality of the reproduction.

Vibration and Image Fidelity

Along with the geometrical proportion factors, *vibration* ranks high as a cause of image deterioration. When you consider that the hairline strokes and serifs in many modern roman type faces may only be two or three thousandths of an inch in thickness, and then project them across 6 ft. to 12 ft. or more of space from copy to negative, you can readily appreciate what a little vibration in the camera can do to type character fidelity. And if you add distortion of the geometric planes, dispersion due to dust, air turbulence due to the heat of the arc lamps, and other factors, it is little wonder that in earlier years lithography and muddy gray typography were synonymous to a quality printer.

So, what can we do about vibration? Either the camera must be designed right to begin with, and be provided with an adequate structure and carefully computed vibration mounts; or we must locate the camera in an isolated part of the plant; or failing that, resign ourselves to lower standards of definition. A set of springs or four blocks of rubber may meet the requirements of a simple specification. However, adequate vibration mounts must take the weight distribution, impressed frequencies and their amplitudes, the natural or resonant frequencies of the components in relation to the supporting structure, and the dampening period and shock absorption into consideration.

Bridge Structure Viewpoint

Let us diverge for a moment to regard the camera from a purely scientific and engineering point of view. What we see is a span or bridge structure supporting several large components whose centers of mass are at different distances above or below the torque axis of the structure. If the supporting structure has been designed simply to support the movement of the components to a fairly straight line, we can meet our requirements for geometrical proportions. However, if we introduce a sway or torque moment by vibration or other means, particularly at right angles to the torque axis, the external masses of copyboard, lensboard and camera back will start into motion, and if the structure is inadequate torquewise, each member will oscillate to its own frequency. The result is a miniature version of the Tacoma Bridge Disaster as far as your image detail is concerned. The one dim gleam of hope under such conditions is that the maximum image vibration is around the torque axis and practically horizontal on the ground glass, and that type reproductions from faces designed with heavy vertical stems and light connecting hairlines, or with entirely heavy strokes such as the Old Style family might at least get by under such conditions.

Things We Want in Camera

In view of all this, our camera specification either becomes detailed and cumbersome in trying to attempt to exactly define the construction, or else we have to work backward from the quality of

EDITOR'S NOTE:

Many of Printing Equipment Engineer's *lithographic, photoengraving and/or rotogravure executive readers will be highly interested in the accompanying article entitled:* Your Camera—Getting the Most Out of It. *It is one of the finest analyses on the subject ever to have been published. Accordingly, we want to pass it along to you. Halpern is a well known engineer, he having created and developed a number of important devices in the photomechanical field, including phototypesetting.*

negative we want and end up with a performance specification.

Yet accuracy of proportion and detail in themselves cannot qualify the camera we want. We also want efficiency, ease of handling, durability, and adequate controls to standardize operation so that the negatives will be uniformly good without having to tax the ingenuity of the cameraman to compensate in processing what he did not get in exposure.

Basic Factors

Let us consider some of the basic factors that contribute to a camera's efficiency.

(1.) Darkroom construction is a *must*. There is little argument on this score in the lithographic industry.

(2.) An accurately calibrated focusing system is indispensable, not only as a time saver, but also because the human eye tires rapidly in focusing detail under dim light conditions, and unless focusing is effected in a number of locations to average out the best positions for the entire field of coverage, the detail may only be sharp in one zone of the image area. In addition, for critical work, visual focus may not always agree with photographic or chemical focus, particularly with some of the older lenses. I have encountered situations with the longer focal length lenses where this difference amounted to over ½ in. in lens position. Completely automatic focusing, such as is available on the better enlargers, may sound desirable, but the extended cam or other mechanisms needed have proved impractical and inaccurate in the few instances that they have been tried, and it is further complicated where more than one lens must be used.

Copyholding Facilities

Rapid copyholding facilities need no discussion other than the choice between suction, vacuum, or glass covered tilting. Arrangements favor the former for accuracy and quality, and the latter for speed in handling copy of various thicknesses.

The Camera Back

The back of the camera, however, is frequently overlooked and underestimated for its contribution to good negative production. The ground glass, vacuum back and dryplate holder may not come into the same plane, so that a sharp image on the ground glass may be out-of-focus on the film itself. While thin base films alter the focal plane but little, the plane of the vacuum back should be compensated for the heavier films. It is also surprising how many vacuum backs in use today are badly bowed, dished, or otherwise warped, so as not only to throw areas out of critical focus but also to provide dot structure variation as a result of the varying screen distance. Under these conditions, the contact screen is sometimes the only way to at least obtain good dot formation.

Specialized Applications

In addition to the basic camera components we have covered, facilities are required for specialized applications such as arrangements and a transparency holder for color correction, and reproduction and step-and-repeat backs for certain classes of stamp, metal printing, band and label work. Timers, lens controls, and controlled uniformity of illumination are also necessary additions that contribute to camera efficiency. But beyond that, we must observe some caution and keep our minds in focus so that we are not veered off from the fundamental requirements we have covered.

Obstructions to Camera Work

So far we have a fairly good conception of the general requirements of a camera. Now let us step into some plants and see the actual conditions under which they operate. If your ears and sensibilities aren't too hardened by experience, you will become aware of the hum and vibration of machinery, the flashing of lights, the sudden bump of a cutter or baler, the clatter of a skid of paper, and perhaps even a gentle swaying of the building itself, thanks to a battery of cylinder presses. These noises can be irritating to the cameraman when he sees their effect on the image and watches the detail do a rhumba on the ground glass.

The operator can shrug his shoulders and get along with his work as best he can. Or he can save the more exacting jobs for overtime when the other equipment is shut down, if both he and management are agreeable. The obvious thing for him to do is to ask for a new and better camera. But frequently a long period intervenes between the asking and the actual procurement. In the meantime, if he has the time, or better yet, if the plant has a good machinist, or the services of a competent camera erector is available, the situation frequently can be improved to at least provide better negatives in the interim.

Checking Conditions

Some of the conditions the operator can check readily are:

(1.) The complete isolation, or free floating of the camera structure. If the camera touches the darkroom wall, or the spring rods touch the side of the upper clearance plate in any position of the copyboard and lensboard or camera back component movements, such contact is a natural direct line for vibration transmission, and is one that can be easily remedied.

(2.) If the springs are incorrectly designed, or the vibration mounts incorrectly rated, the vibration may be transmitted through them. Usually this can be detected optically or by a light finger touch on any portion of the floating structure, comparing the sensation with that felt in the legs or darkroom wall. Or a cup of water can be placed on the camera bed, and the reflection of some lamp observed on its surface. Rectification of a condition where vibration is transmitted through the springs or mounts is entirely possible but not as easily accomplished as it will require a careful study of the conditions, and calculations to choose a set of mounts that will be satisfactory. If in addition the basic camera structure is flimsy, emphasis should be directed definitely to camera replacement instead of attempting to keep up an inadequate design.

(3.) Things to watch for are avoiding the passage of others through the light trap during exposure, for opening and closing darkroom doors result in air surges that will wiggle the lensboard through the bellows opening. Where such movement of personnel is necessary, the use of large light-baffle ventilators in the darkroom wall, or the open entry through an S-shaped maze are helpful.

Checking Camera Accuracy

As for testing camera accuracy, such tests should be a regular annual or semi-annual event, just as you would periodically check the accuracy of a photocomposer, or have your car inspected, for that matter. To facilitate camera testing, some standard test equipment should always be available. This should include

(*a.*) A 20 or 30 power microscope with a wide base or suction cup on the legs so that the operator will not exert a varying pressure on the ground glass or move the microscope during observation.

(*b.*) A pair of accurate grid charts. The Corps of Engineers uses identical prints of a cross section grid on the

Craftsmanship's Liaison with Research and Engineering Council—Although there were a goodly number of Craftsmen-Council members in attendance at the Boston Research and Engineering Council meeting in May, these three men constituted friendly Craftsman representation. They were: Peter J. Barnard, Ferd Voiland, jr., and J. Homer Winkler.

Barnard's vocational activity is Personnel Director, H. Wolff Book Mfg. Co., New York, N. Y.; he is also Director of the Printing and Publishing Div., National Safety Council, and Chairman, Safety Committee, Intl. Assoc. of Printing House Craftsmen.

Voiland is State Printer for the State of Kansas (Topeka), and is third vice president of the Intl. Assoc. of Printing House Craftsmen.

Winkler is technical advisor to Battelle Institute, Columbus, O.; he is a past president of the Intl. Assoc. of Printing House Craftsmen, and currently is serving seventh term as secretary of the Research and Engineering Council.

ground glass and on a metal based copy. Such an arrangement can be used to check accuracy through most of the reproduction range.

(*c.*) A rigid straightedge with a ground or scraped-in reference edge, of a size corresponding to the vacuum back. Such a straightedge can be used on the copyboard, rails and other check points on the camera.

(*d.*) An accurate machinist's level, preferably with a bubble graduated in thousandths.

(*e.*) A feeler gauge.

(*f*) A trammel rod with a dial micrometer indicator for checking the ground glass, vacuum back, and dry plate holder so they will come into the same plane. There are other items that can be used for testing, ranging from a plumb bob to a collimator, but the previously mentioned equipment is usually sufficient in most instances.

Work Accuracy

If we know the accuracy required for our work, it is not difficult to carry out the necessary tests to determine if the camera is all it should be. Good typographical reproduction requires a camera that will resolve at least 40 lines per millimeter (or 1000 lines per in.) if the type character design is to be retained. This figure corresponds to about the maximum that a good lens in the 18 in. to 30 in. focal length range will provide. It also means that image vibration during exposure as indicated by examination on the ground glass should not exceed 0.001 in. and preferably should be kept to half that amount.

Camera Accuracy

As for accuracy between copyboard, lensboard and camera back, this too is conditioned by the class of work being reproduced. Variations of 0.01 in. in carriage positions are noticeable in critical focusing with the lens nearly wide open. Of course, stopping the lens down will increase the depth of focus, but at the expense of definition and increased exposure, for most lenses provide maximum resolution with the lens closed down only one or two stops below their maximum aperture. A tilt of 0.01 in. over a 24 in. copy would only cause a 0.003 in. or 0.004 in. image size variation because of the limited acceptance angle, and this is undoubtedly suitable for the general run of work. It would not, however, meet mapping or charting accuracy requirements where dimensional tolerances are usually held to within 0.001 in. in 12 in. Similarly a warped, bowed or twisted copyboard or vacuum back may contribute to local geometrical distortion and loss of definition. The straightedge and feeler gauges can supply your answer there.

Humidity Causes Variables

We are all aware of what humidity variations will do to film size and are sometime glad to pay the premium for Vinylite or Styrene based films to assure dimensional stability of the negative. Yet, we are inclined to overlook the fact that paper copy is equally affected and that the dimensional change across the paper grain is three to four times that along the grain. When paper copy is exposed to the heat of the camera lamps for an appreciable time (as during visual focusing or even during exposure), the copy will gradually change its dimensions. This creeping of the subject may contribute to loss of definition in some areas.

Choosing New Camera

Now, suppose you are given the green light to get a new camera. How would you go about choosing it? I'm sure none of you buy a car because it has an impressive dashboard or a three tone color job. You want to know what's under the hood, what its acceleration and gasoline consumption is like; how well it handles on the road, its dependability and availability of service facilities as well as the initial and operating cost.

You should do the same for a camera. Start out listing the range and capacity of work to be done, and try to project it into the immediate future if any changes are anticipated. Then consider what quality and accuracy standards will be in keeping with the class of work you are doing.

Next study your plant conditions in the immediate environment to determine how serious the vibration factor is. If conditions are very bad, this is an opportunity to try to relocate the camera department elsewhere, for even the best of commercial cameras will show some of the effects of vibration.

Unless there are great extremes in ratios of enlargement or reduction, try to put a little extra money into getting one good lens with a diaphragm control. Do this rather than alternating between several indifferent lenses, even if it may mean choosing a camera bed a few feet longer so that you can cover your normal range with the one lens. List also the other things that will actually contribute to the camera's efficiency and accuracy.

Then get data on all the possible cameras. Compare each one with your requirements and narrow down the field until you have two or three that come close to what you need. At this point you should appreciate that a standard camera costs less and is usually better than one modified to meet a particular specification; and that the ideal camera is usually economically unobtainable. From here on, you may have to reach a compromise with some of your listed requirements, but if your accuracy and quality of definition values are established, you should never compromise with them.

Camera is Starting Point

Coming back to our basic definition of a camera as a unit of productive machinery, it is also well to keep in mind that the camera is the starting point in translating the original into a series of reproductions through negative, positive, and plate to the printed job on paper. A few extra minutes of care, in positioning and handling of materials or a few extra dollars spent for initial procurement and maintenance may save hundreds of dollars on a job. This may mean reducing art work, touching up on the negatives as well as possible makeovers of press-plates and lost press time. You also will have the personal satisfaction of knowing that every negative is indelibly marked with the quality of your craftsmanship.

Petrequin Named Vice President

James A. (Jack) Petrequin has been elected vice president-sales of the Willsea Publishing Co., publishers of Printing Equipment Engineer. A graduate of Shaker Heights High School, Petrequin received an A.B. degree from Dartmouth in 1935. He has been advertising manager and, more recently, sales representative in the Chicago area for Harris-Seybold Co., for a total employment of 10 years with that firm. His acquaintanceship in the Graphic Arts industry is wide. He's married and has two children, a boy and a girl. You'll be seeing a lot of Petrequin around and about as he promotes the best technical magazine in the Graphic Arts industry.

Joint Graphic Arts Education Conference of the Education Council and Intl. Graphic Arts Education Assoc.

Some of those attending the meeting in Pittsburgh, Pa., July 3 to 8, at Carnegie Institute of Technology were: (*left to right*) Herbert Livesey, National Assoc. of Printing Ink Makers; Quentin Young, Lithographers National Assoc.; William Morgan, National Assoc. of Litho Clubs; Bernard J. Taymans, Printing Industry of America; Ralph D. Cole, Education Council of the Graphic Arts Industry; Hon. Raymond Blattenberger, U. S. Public Printer; Kenneth R. Burchard, Intl. Graphic Arts Education Assoc.; Wade E. Griswold, Lithographic Technical Foundation; Harry Howard, Book Manufacturers Institute; Edward Lynch, Direct Mail Advertisers Assoc.; Fred J. Hartman, Intl. Graphic Arts Education Assoc. Other national and local printing trade associations were represented at the Conference.

Attending the first joint meeting of Graphic Arts educators and members of the printing industry were representatives from 26 local and national printing trade organizations as well as over 150 printers and printing teachers from the United States, Canada, and Mexico. The five day parley was sponsored by the Education Council of the Graphic Arts Industry and the Intl. Graphic Arts Education Assoc. in connection with the latter organization's 30th Annual Conference on Printing Education.

On Thursday, July 7, under the chairmanship of Robert H. Caffee (William G. Johnston Co., Pittsburgh), the Education Council and the Intl. Graphic Arts Education Assoc. met in an all day joint session to hear case study reports from eight cities as to how printers and teachers cooperate in developing Graphic Arts industry education programs to meet local needs.

Public Printer Raymond Blattenberger believes Graphic Arts instruction is opening up attractive fields for teachers. There has been a recognition, he said, that printing teachers' salaries should be fully commensurate with their knowledge and abilities, and he was sure more could be done along this line with the aid of industry leaders. He foresaw a broadening base of Graphic Arts instruction due to widespread demand for more training at college and university levels in management and technical subjects. "Rapidly expanding newer processes," he said, "call for scientific and engineering instruction that public high schools can hardly be expected to provide. Herein lies further opportunity for experienced instructors who can learn as well as teach."

William H. Walling (Rogers-Kellogg-Stillson Co., New York, N. Y.), president of Printing Industry of America, offered a view of the industry in terms of "as others see us." In training and education, he declared, "We must find ways to relate the art and skill and industry of printing to the needs of the world, of our country, of our industry, and our people." He cited major developments in the social and economic life and structure of the country during the past few years, pointing out that printing was indispensable to all.

Opening the printing teachers sessions of the joint Conference on Printing Education on Monday, July 4, Samuel M. Burt, executive secretary of the Intl. Graphic Arts Education Assoc. and the Education Council of the Graphic Arts Industry, reviewed highlights of recent accomplishments of both organizations and outlined plans for the immediate future. He added that "the future still holds much that must be done." IGAEA membership, he noted, while at the 600 mark, still comprises only 20% of the total estimated number of Graphic Arts teachers in the country.

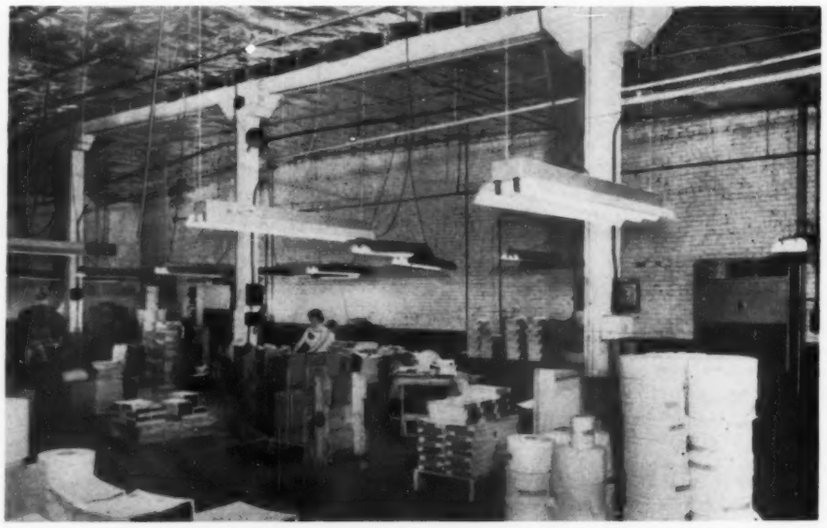
The Education Council's Executive Committee appointed Samuel M. Burt, executive secretary, to the position of managing director. Bernard J. Taymans, formerly managing director, was appointed consultant.

Poster and Stamp Judges

The 1956 Intl. Assoc. of Printing House Craftsmen Printing Week Poster and Stamp Contest's selection of judges was announced in Chicago recently by Chairman Floyd C. Larson of the Intl. Printing Week Committee.

Selected to judge poster entries from United States and Canada were Wayne V. Harsha, editor of *The Inland Printer* trade magazine; William O. Morgan, offset editor of *The Graphic Arts Monthly* trade journal and 1st vice president of the Natl. Assoc. of Litho Clubs; and Ralph Karsten, president of Screen Flock Industries, Chicago, and vice president of the Screen Process Printing Assoc., Intl. Harsha has been named as chairman of the poster judges group.

Stamp contest judges selected were Howard N. King, past president of the Intl. Craftsmen and typographic consultant to Intertype Corporation; D. Walter Wardrop, president of the York (Pa.) Craftsmen and an executive of the Yorktowne Advertising Agency; and C. Robert Fowler of the 1955 Intl. Printing Week Committee, a member of the Lehigh Valley Craftsmen, and an executive with the Hobson Printing Co., Easton, Pa.



Air Conditioning Benefits Reported—Cullom & Ghertner Co., Nashville, Tenn., printer, reports its Chrysler Airtemp air conditioning installation "is paying its way." E. V. Williams, vice president of the printing firm, cites these advantages of the air conditioning system: Paper stock stays in better condition to print, rollers on the presses last longer and work goes along more steadily because of improved working conditions. The plant involved is a one floor, 50,000 sq. ft. building covered by a flat roof. Aluminum insulation on the ceiling reduced the building's air conditioning requirements by 50 T., improved lighting conditions and reduced heating expenses about 40%.

Summary

Of Cincinnati Craftsmen's Convention Program

CRAFTSMEN attending the 36th Annual Convention of the Intl. Assoc. of Printing House Craftsmen, Netherland Plaza Hotel, Cincinnati, Aug. 7-10, will listen to a well-balanced program.

Sunday, Aug. 7, is being given over mostly to registering, greetings among friends, and formal convention-opening ceremonies.

On Monday, Aug. 8, however, the real work of the convention begins. John D. Corrigan is to give an address on the subject of *The Dynamic Power in You*. The luncheon session is to hear talks on *Philosophy of Management of Local Clubs* by Herbert Livesey, executive secretary, Natl. Assoc. Printing Ink Makers, and *Club Program on How Our Business System Operates* by William Gutwein, chairman, Intl. Supervisory Training Committee. Session moderator is to be Ferd Voiland, jr., Intl. third vice president.

In the *Gravure Steps Out* session on Monday afternoon, moderated by Joseph Jorling, McDonald Printing Co., Cincinnati, there will be several talks given. These will include: *Photo Engraving and Finishing of Rotogravure Cylinders*, by Oscar Smiel, Intaglio Service Corp.; *Modern Gravure Presses*, by Elmer Stacey, E. G. Staude Mfg. Co.; *Inks for Gravure Operations*, by Robert Griffith, Interchemical Corpotion; and *Gravure's Position in the Publication Field* by Allen C. Black, Crowell-Collier Publishing Co.

The *Solutions to Some of Our Letterpress Problems* session will be moderated by J. Homer Winkler, Past Intl. President. Talks in this session are to include *True Rolling—Theory and Practice*, by Al T. Kuehn, Miehle Printing Press & Mfg. Co.; *Minimum Precision Make-Ready* by O. F. Duensing, Vandercook & Sons; *How To Cope with Paper Variations* by Ronald Drake, Champion Paper & Fibre Co.; and *Offset Eliminators and Letterpress Operations*.

Tuesday, Aug. 9, morning topics are *Sidelights of Printing* with Kenneth R. Burchard, presiding officer. Topics include *Preventative Maintenance of Your Printing Equipment* by Russell Anness, Gardner Board & Carton Co.; *The Humanics of Quality Control* by B. E. Sooy, Wolverine Carton Co.; and *Safety Programs* by Peter Bernard, chairman, Intl. Safety Committee.

At lunch on Tuesday the big subject is Printing Week, with Floyd Larson, Intl. Printing Week Committee chairman, presiding. Thomas P. Mahoney, Intl. president, is to present the Printing Week awards. Rawson H. Murdock, jr., chairman, Michiana Club Printing Week Committee, will give *The Michiana Printing Week Story*. Floyd Larson will speak on the subject, *What Are You Doing About 1956 Printing Week?*

Dr. Kenneth McFarland, education consultant, General Motors Corp., will begin the Tuesday afternoon session with a human relations talk, *Lamp Lighters*. A technical program on *Gimmicks, Gadgets and Instruments*, presented by the Indianapolis Club, Technical Committee, follows. Sometime around midnight, the nomination meeting for 1955-56 Intl. officers will take place.

Wednesday, Aug. 10, the last day of the convention, begins with the main business meeting. The afternoon *Package Printing Clinic*, moderated by Walter E. Sooy, Gardner Board & Carton Co., will include these talks: *What the Package Buyer Wants From the Printer* by William Romney, Proctor & Gamble Co.; *Offset Printing of Cartons and Labels*; *Flexographic Printing of Films and Foils* by Robert Jones, Dobeckmun Company; and *Letterpress Printing of Papers, Wrappers and Labels* by Delmore Moffett, Kalamazoo Vegetable Parchment Co.

A bindery clinic, scheduled for Wednesday afternoon, will include talks on *Estimating Costs in Bindery* by William Sage, Commercial Bindery, Detroit; *Tricks for Cheaper, Faster and Better Bindery* by James B. Blaine, J. F. Cuneo Co.; and other topics.

Then, with the work of the convention behind them, Craftsmen and their ladies will dine and dance Wednesday night to close the convention.

Craftsman

The International Craftsmen's Association is distinguished by the voluntary service of its membership and leaders. This year, the 36th annual convention, which takes place at the Netherland Plaza Hotel, Cincinnati, Aug. 7-10, is no exception. *Printing Equipment Engineer* salutes Craftsmen everywhere on the occasion of the 36th convention. This presentation is special recognition of the elected and appointed officers, committee chairmen and representatives who give so freely of their talents and time for the betterment of the industry.

▶ **Thomas P. Mahoney,** International president, is vice president, Regensteiner Corporation, Chicago. An energetic and sincere president of the International, he has always advanced the best interests of Craftsmanship. He's an enthusiastic promoter of fine printing, too, as long as it's in color.

TOMMASINI

WISE

VOILAND

KOLB

KING

OLDT

TESS

A. R. Tommasini, first vice president, is superintendent of the University California Press, Berkeley, Calif. He is a noted speaker and author on typography and design, plant management and production control.

George Wise, second vice president, is partner-superintendent, Duganlis, Inc., Cleveland, As membership chairman, he has done much to strengthen International. Wise is a much traveled vice president.

Ferd Voiland, jr., third vice president, is State Printer of Kansas. Two ars chairman of the Intl. Printing Week Committee, his administration enaced the celebration of Printing Week by local clubs. He, too, travels a lot.

Albert L. Kolb, treasurer, is manager, Printing Department, Marine Trust ., Buffalo, N. Y. Kolb, completing his fifth (and last) term as treasurer, introduced a new accounting and auditing system to the Craftsmen's organization.

▶ **Howard N. King,** past president, is vice president of Maple Press Co., York, Pa. He traveled far during his term of office to further Craftsmanship. Technical workshops were only one of many accomplishments of his administration.

▶ **Pearl E. Oldt** is executive secretary of the International Association of Printing House Craftsmen. He has served the organization well since his appointment in 1947. He has a special interest in typography.

▶ **Elmer H. Tess,** deputy membership committee chairman, is owner of T&T Party Service, Duluth, Minn. He has served Craftsmen as Fourteenth District Representative and as president of the Duluth-Superior Club.

Leaders

KEEFE

MORRIS

BURCHARD

OAKES

▶ **Howard N. Keefe,** publications chairman, is sales representative, Cincinnati Lithographing Co., Inc., Cincinnati, O. He is the former International historian and past president of the Cincinnati Club. Typography is his hobby.

▶ **Charles V. Morris,** public relations chairman, is assistant to the president, Henry Lindenmeyr and Sons, New York, N. Y. He is a speaker and writer as well as one of the founding fathers of Printing Week in New York, N. Y.

▶ **Kenneth R. Burchard,** technical chairman, is professor of printing management and head of the Department of Printing Management, Carnegie Tech. He learned the trade at the *Gasconade County* (Mo.) *Republican*.

▶ **Gradie Oakes,** advisory council chairman, is president, Process Color Plate Co., Inc., Chicago. Oakes continues to serve Craftsmanship in his present office after having been International president in 1948-49.

TIERNEY

ROSS

PETERS

CULVER

HORN

FRIEDENBERG

LARSON

▶ **Tom Tierney,** club bulletin service chairman, is publisher of the *New England Printer & Lithographer*, Boston. Tierney has been a director of the Boston Club and has served the industry on several committees.

▶ **James Ross,** club programs chairman, is superintendent of the Consolidated Lithograph Mfg. Co., Ltd., Montreal, Canada. Ross has been associated with his present firm for 27 years and has a special interest in platemaking.

▶ **Alfred T. Peters,** constitution and by-laws chairman, is vice president, Thos. C. Peters Printing Co., Utica, N. Y. He has been with that firm more than 30 years. Peters was first president of Utica Club in 1926.

▶ **Byron G. Culver,** Graphic Arts education chairman, is head, Department of Printing, Rochester Institute of Technology, Rochester, N. Y. This is his fourth term in this office. Culver has pioneered in Graphic Arts education field

▶ **Milton Horn,** International historian, is pressroom foreman, Marvin D Evans Co., Ft. Worth, Tex. He is past president of the Ft. Worth Club and o Ninth District. He also is the editor of the *Worthcrafter*, the local Craftsma bulletin.

▶ **Harry B. Friedenberg,** participating memberships chairman, is produc tion manager, Tri-Craft Press, Detroit. Friedenberg has served Craftsmanship in a variety of offices including three terms in his present International position.

▶ **Floyd C. Larson,** Printing Week chairman, is director, U. S. Navy Printing Office, Great Lakes, Ill. Printing Week is becoming a bigger and better cele brated affair each year. He is a Chicago Club past president.

BERNARD GUTWEIN FAUNCE HAMMEL GRIER HOLLAND DAVIS

▸ **Peter J. Bernard,** safety chairman, is director of personnel and safety, .. Wolff Book Mfg. Co., Inc., New York, N. Y. He is a member of the New York Club and has served as a member of its board of governors.

▸ **William F. Gutwein,** supervisory training chairman, is president, Wm. F. Gutwein, Inc., Louisville, Ky. Gutwein's special interest is negotiating and promoting understanding between people. He's proved he has this special knack.

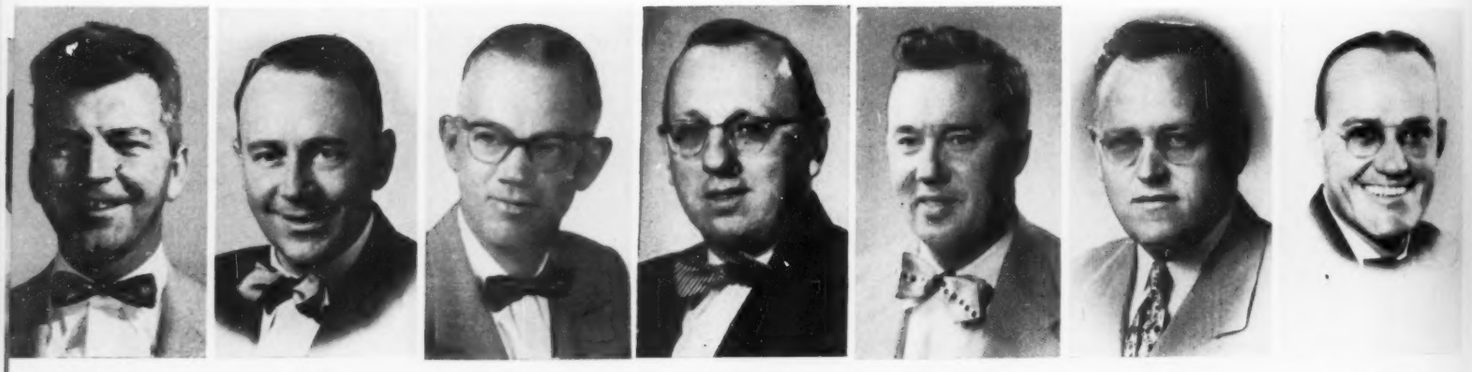
▸ **Harry M. Faunce,** First District representative, is a sales engineer for umford Press, Boston. He has been a compositor, pressman, foreman and superintendent in his 37 years in the craft. A past president of the Boston Club.

▸ **William H. Hammel, jr.,** Second District representative, is branch manger, Jersey City plant, Bingham Brothers Co. He is a member of the Newark Club of Printing House Craftsmen. Gardening and swimming are his hobbies.

▶ **William H. Grier,** Second District deputy, is sales manager, Kenyon Printing Co., Inc., Syracuse, N. Y. Grier has spoken before many education, advertising and business groups on printing. He is a past president of the Syracuse Club.

▶ **Alfred V. Holland,** Third District representative, is manager, Printing Dept., London Life Insurance Co., London, Canada. He is charter president of the London Club and served an apprenticeship on the *London* (Can.) *Free Press.*

▶ **Eugene H. Davis,** Fourth District representative, is the Philadelphia branch manager, Printing Ink Div., Interchemical Corp. Davis has been with this company and its predecessors for more than 30 years. He likes selling.



KEATING LARSEN EDGAR LOHR ASKINS ELLIS CHEATHAM

▸ **James T. Keating,** Fourth District deputy, is the manager, Baltimore ranch, Bingham Brothers Co. He has been with the firm for eight years, including ix years as assistant manager. Keating makes a hobby of color photography.

▸ **Carl H. Larsen,** Fifth District representative, is a salesman for Braden utphin Ink Co. He had previously worked for Universal Engraving, Petrequin Paper and Warner & Swasey Co., all of Cleveland. Golf is Larsen's hobby.

▸ **Robert M. Edgar,** Fifth District deputy, is president of Neyhart Printing o., Pittsburgh, Pa. His hobby is being a gentleman farmer, but his activity in nternational affairs leaves little time to stay down on the farm.

▸ **Marvin R. Lohr,** Fifth District deputy, is president, Michigan Litho Graining Supply, Inc., Detroit. He has been secretary of the Detroit Club, treasurer of the Printing Supplymen's Guild of Detroit and Fifth District representative to the International organization.

▶ **Loren E. Askins,** Fifth District deputy, is assistant general manager, Gebhart Folding Box Co. He is past president of the Dayton Club. Askins likes the production end of his firm's business the best.

▶ **Earl S. Ellis,** Sixth District representative, is sales manager, Western States Envelope Co., Milwaukee. He's been with that company for over 20 years. A past president of the Milwaukee-Racine Club. A Craftsman since 1935.

▶ **Frank Cheatham,** Seventh District representative, is salesman in South Carolina and Georgia for Printing Ink Division, Interchemical Corp. He is a past president Atlanta Club. Has given many talks before local groups.

FITZPATRICK PRUCHA HUGUES SHEPHERD OGILVIE PHILLIPS HANSEN

▶ **Sam H. Fitzpatrick,** Seventh District deputy, is salesman for Miehle Printing Press & Mfg. Co. in New Orleans, La. He attended Technical High School in Atlanta, Ga. He is a member of the New Orleans Craftsmen's Club.

▶ **Alvin F. Prucha,** Eighth District representative, is co-owner, Service Press Co., Cedar Rapids, Iowa. He is a past president of the Cedar Rapids Club. Among Prucha's hobbies are fishing, boating and building.

▶ **Andre P. Hugues,** Eighth District deputy, is manager, Printing Dept., Harry Turner & Associates, Inc., Topeka, Kan. He is a past president Topeka Club and has served on the Intl. Publications and participating membership commissions.

▶ **Thomas L. Shepherd,** Eighth District deputy, is secretary-treasurer, Mono-Type Typesetting & Fdry Co. He was president (1947) of the St. Louis Club, following his dad (Rawleigh T. Shepherd), who was president of the same clu in 1932.

▶ **Troy M. Ogilvie,** Ninth District representative, is sales manager, Olmstec Kirk Paper Co., and has been with his present firm for 28 years. He's a membe of the Dallas (Tex.) Club which he counts as his hobby.

▶ **Ray F. Phillips,** Tenth District representative, is secretary of Ward Phillips, Ltd., Vancouver, Canada. He's been with this firm for 26 years an is specially interested in production. Hobbies include carpentry and fishing.

▶ **Arthur Hansen,** Tenth District deputy, is superintendent of Abbott, Kern and Bell Co., Portland, Ore. He is a past president of the Portland Club. Hanse has pioneered in the study of composing room efficiency and management.

NIELSEN MATSON CHUKA RITTERBAND THRELFALL ALLEN AUGUSTINE

▶ **Peter D. Nielsen,** Eleventh District representative, is manager, Research Engineering, Pacific Div., Moore Business Forms, Inc. He has been with his present firm for more than 32 years and been a Craftsman for more than 12 years.

▶ **Gordon T. Matson,** Twelfth District representative, is owner, Modern Typesetting Co., Los Angeles. He's an operating owner who likes active supervision. Hobbies include all outdoor sports such as hunting and fishing.

▶ **Andy Chuka,** Twelfth District deputy, is owner, Andy Chuka Print Shop, Phoenix, Ariz. He describes himself as "chief, cook and bottlewasher" of his plant operation. Special interests include layouts and typography.

▶ **Robert M. Ritterband,** Twelfth District deputy, is a partner in the Lincoln Printing Co., Los Angeles. A self-taught printer, he has been charter president of the Santa Monica Bay Club and on the Intl. Printing Week Committe

▶ **Herbert Threlfall,** Thirteenth District representative, is president-treasure John F. Greene Co., Inc., Providence, R. I. He was for 30 years with Akerman Standard Co. He has served Craftsmanship in many ways.

▶ **Fred Allen,** Fourteenth District representative, is foreman, Rapid Grip an Batten Co., Winnipeg, Canada, one of the largest platemaking firms in Canada He has been an etcher and a camera operator. Hobbies include golf and curlin

▶ **Lee Augustine,** general chairman of the 1955 International Craftsmen' Convention, is vice president, Printing Machinery Co. An outstanding Craft man, he recently completed two terms as representative-at-large of the Inte national.

Moisture Restored in Printed Web Automatically by Steam Conditioner

By DR. WORTH WADE*

**Manager, Patent Development Dept., American Viscose Corp., Philadelphia.* (*Courtesy March* Paper, Film and Foil Converter.)

EARLY reports from users of the new high speed Sylvania Web Conditioner indicate highly successful results, with one major converter stating: "We are now delivering *printed* cellophane in the same condition in which we receive film from our suppliers."

It has not always been possible to avoid loss of moisture during the printing process, particularly since heat is used to set the inks. With the development of moisture-proof paper, the problem of moisture loss became a serious one, often resulting in brittle film and excessive waste.

Attempts to Replace Moisture

Several attempts have been made to replace this moisture. Open steam pipes and even high humidity chambers were tried. However, none of these crude and expensive processes could control satisfactorily the *amount* of moisture reintroduced into the film, and they became more and more inadequate with the increasing speed in the converting industry.

Converters now using the conditioners report that complaints of brittle film have almost entirely been eliminated. Waste has been cut down and the quality of printed material greatly improved. Users have found that the conditioner restores the weight lost by moisture being driven out of the film during the printing process, bringing the moisture content back to normal.

The conditioner improves the general appearance of the film by removing wrinkles and distortions, and assures better printing by removing residual solvents from the ink, resulting in better anchorage between inks and film. The winding quality of the finished roll is greatly improved.

> EDITOR'S NOTE:
>
> *Subsequent to publication of this article,* Printing Equipment Engineer *has been informed that experiments are now being carried on in paper converting plants to reintroduce moisture in paper webs printed with heat-set inks on presses operating at speeds in excess of 500 f.p.m. It is stated by American Viscose Corp. that "Absolute control of moisture added is now a strong possibility in the paper printing industry."*

Of Compact Construction

The conditioner is of compact construction, measuring approx. 40 in. by 13 in., the width depending upon the size of the press. The stainless steel steam jets and exhaust manifolds are mounted in an aluminum case, which is inserted in a fiberglass insulated second case with a baked enamel finish. The conditioner is easy to install and requires no additional equipment.

The conditioner is installed at the end of the processing line, and the automatic controls are synchronized with the press. As the press starts and stops, the conditioner is turned on and off. The temperature maintained in the unit is a constant 190 deg. F., and the steam pressure ranges between 3 lbs. and 5 lbs. per sq. in.

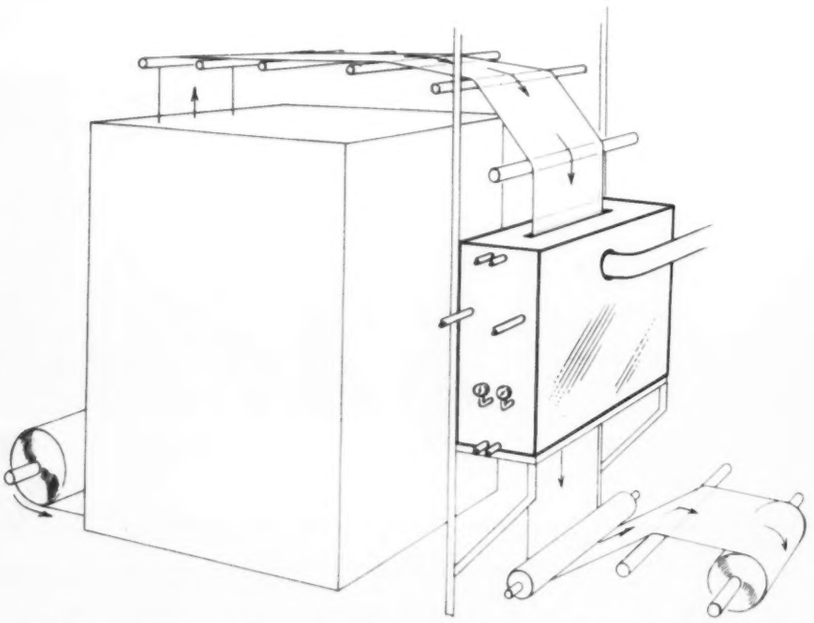
As the film comes off the press after printing, it enters the conditioner where pinpointed jets of steam, attacking the web at all angles, soften the coatings by heat and pressure and drive moisture into the film. Moisture penetration into the base of the film is excellent at web speeds anywhere from 50 ft. to 550 f.p.m.

The printed material being processed enters at the top, makes one pass only, and comes out at the bottom of the conditioner and passes around a cold roll onto the rewind. There are no moving parts within the unit itself. The conditioner is used with equal success on rotogravure and flexographic presses.

Originally Developed for Cellophane

The conditioner was originally developed to control the moisture content of Cellophane after printing by John Conti, head of the Technical Service Dept., Sylvania Division, American Viscose Corp. Several months ago, patentable improvements were announced which made the conditioner adaptable for use in the glassine and paper fields.

The S. W. Speers Co., Upper Darby, Pa., is the sole licensee of the American Viscose Corp. for the manufacture and sale of the conditioner. This company holds the rights to the production of conditioners for use with Cellophane, glassine and paper in the United States and Canada. The original producer of Cellophane, La Cellophane, Paris, has been awarded a license to distribute the conditioner in France.



This diagram is symbolic of a printed web passing through a heat-set ink drying oven (large rectangle). The web passes on idlers from the top of the oven where it enters an opening in the top of the Sylvania Web Conditioner. Steam is piped into the conditioner through the upper pair of inlet pipes. Excess steam is carried off by the lower pipes. The large exhaust pipe (right) carries moisture and heat from the unit. The two gauges register steam pressure. Size of the conditioner is dependent upon size of the printing press. A conditioning unit for a 40 in. web measures 57 in. by 38 in. by 16 in., weighs approx. 470 lbs. At the moment, the conditioner can be used on rotogravure and flexographic presses. Conditioner can be modified to restore moisture to paper, glassine and Cellophane. (Illustration courtesy Sylvania Cellophane.)

First President—A. R. Tommasini, 1st vice president of the Intl. Assoc. of Printing House Craftsmen, congratulates Ernie Benck (right) on becoming the first president of the San Joaquin Valley Club of Printing House Craftsmen. Further honors are bestowed on the club on becoming the 100th to join the International organization.

The Council Can Help Commercial Printer Eliminate Low Profits

IN WRITING about declining annual profits in the commercial section of the printing industry, we are reminded that a greater number of commercial management executives should avail themselves of the benefits afforded by company membership in the Research and Engineering Council.

Progressively declining profit industrywise is the curse of the commercial printing industry. Donald Somers, technical director, speaking before the Detroit PIA Convention last October presented impressive statistics which showed that by 1960 (if the present rate of decline is continued) there will be no profit at all for the commercial printing industry. The point we wish to make in mentioning Somers' statistics is that commercial printing plant management in general has not taken advantage of one of the most potent means for reducing plant operating costs by taking company membership in the Research and Engineering Council.

Currently, the Council is the only Graphic Arts organization in the commercial printing industry seeking to reduce plant operating costs through encouragement and coordination of research and through plant engineering methods.

Through its efforts, the Council is endeavoring to encourage and coordinate research activities in the Graphic Arts industry with the expectation that equipment, processes and ways and means will be developed with which to do as good and/or better work in greater volume at less cost. Evidence is at hand which indicates that through Council activities these objectives are commencing to be realized.

In view of Somers' factual statistics regarding progressive decline of profits in the commercial branch of the Graphic Arts industry it appears that printing management itself hasn't been able to stop that decline. Perhaps one reason is that management doesn't think of its industry in broad enough manner. So why not become a company member of an organization designed specifically to help the industry, at the reasonable fee of $100 per year?

The greatest potential for accomplishing as good or better work at less cost is through research and plant engineering. The Council is up to its neck in both of these activities. It was organized solely for those purposes. In case you should want to obtain the complete story about what the Council is doing to help the Graphic Arts profit situation write to Research and Engineering Council, 719 Fifteenth St., N.W., Washington 5, D. C.

Intelligent Photoengraving Plant Layouts

By Sam B. Anson, jr.*

**General Sales Mgr., Chemco Photoproducts Co., Inc. Address delivered before Southeastern Photoengravers Assoc. winter meeting, January 1955, Columbia, So. Car.*

AN intelligent photoengraving equipment layout consists simply of a group of pieces of modern equipment, so placed as to provide maximum fatigue-free and efficient operation. Sensible, orderly arrangement of the machines best suited for the purpose can be a deciding factor in getting our money's worth out of the major item of labor expense which represents over 50% of our total outlay. When you stop to consider that each man in your plant costs you roughly 10c a minute, the importance of proper layout cannot be overemphasized. Un-productive time, that is, time spent moving the work from one operation to the next is not only time consuming, but it puts an unnecessarily heavy burden on your men. Be sure the manufacturer of the equipment you select for your plant in the future has built in all of the details that make such a difference in your profit and loss statement.

Machines should be arranged so as to be easily accessible by the operator and at the same time point in the direction of the production flow. There is nothing wrong with locating a machine so the operator can have as easy a time of it as possible. In the long run, this feature will go far toward increasing the efficiency and economy of operation.

The engraving process is made up of multiple operations, some of which are more or less straight in line or non-repetitive. By their very nature they require the least amount of the layout man's attention. I think that the routing and finishing departments are good examples of this phase of the process. The gallery is a frequently abused department from a layout standpoint, but the etching room usually takes the cake.

Elements to Consider

Except in generalities, no two plants have the same problem. What is good for plant A is not necessarily good for plant B. In principle, here are some of the things we must consider in any layout; Drain size and location, electrical connections, supporting pillars, windows, fire exits, shape and size of space, work progress, ventilation, number of men employed and whether or not it is a multiple shift operation.

You can see how foolish it would be to arrange a Ben Day or art department for north light if the shop is a one shift, night enterprise. On the other hand, in a multiple shift operation, we must provide for North light (if there is any to be had) and indeed we must take steps to avoid steps.

Gallery Requirements

The gallery should be located as near the copy entry way as possible. This entry way may be your art department, composing room or your front door. Whether your office or your engraver helps scale the copy seems to be a matter of local choice. But it seems that the former method is becoming more popular with every passing year. Gallery equipment requirements are best determined by your type of work and its load. But it should be, of course, a darkroom camera, Fig. 1.

Back your camera into a well lighted, well ventilated darkroom. Darkrooms are much too dark, usually, and they need not be. Somewhere along the line, many people got the idea that darkroom walls and ceilings should be painted dead black. But we all know that a darkroom need to be only light-tight. If it is, white enamel could be used with no trouble.

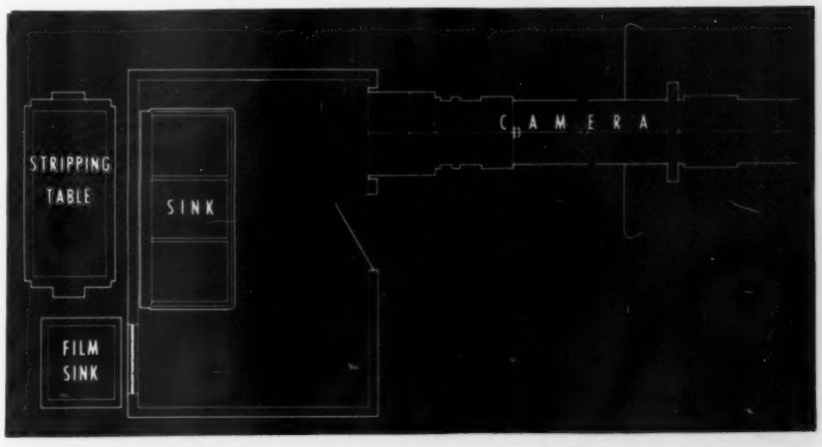


Fig. 1.—*The photoengraving gallery is frequently laid out improperly. When the gallery is wrong, the darkroom and stripping departments go astray. The author of this article in the above diagram suggests a practical gallery floor plan layout.*

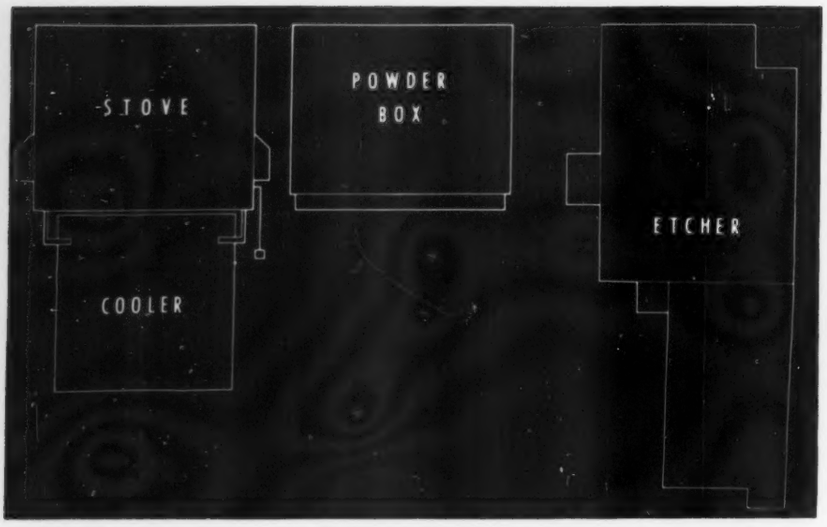


Fig. 2.—*Says the author: "The etching room is the most consistently misarranged department in the entire photoengraving plant . . . Much of the worker's time is spent in simply moving the work into position for the next operation." It is essential that the evils of excess loss of production be limited so far as practicable.*

As long as the safe light is safe and the room is light-tight, we can do no harm by reflecting the red rays emanating from the safelight.

Ventilation is a mighty important item and too often is overlooked. Several reasonably priced light-tight exhaust fans are available. They can be depended upon to do a good job if their electrical rating is sufficient to move whatever number of cubic feet of air is required.

Temperature control for film processing is here to stay. Any stop gap arrangement like ice cubes simply is not dependable enough. You need some kind of positive control requiring very little maintenance or attention. What good are light integrators and film with uniform sensitivity if the developer is not held at constant temperature?

The Darkroom

Darkrooms need not be dripping caves. Keep them as small as you can consistent with enough space for your vital needs. You don't need layout consultation to recognize the importance of a sliding door through which negatives may be passed to the stripping department. This simple expedient not only saves your operator time and energy, but it eliminates the trail of hypo to the stripping department which is characteristic of foot delivery. Not only are these hypo trails unsightly, but they are very slippery when wet and are ground into powder when dry. In day and night shift plants, the trail never gets a chance to dry, presenting quite an obstacle course.

Stripping Operations

The stripping sink need not be anything more elaborate than a stainless steel pan, drain connected and of ample size and depth to handle your normal work load. It is unnecessary to submerge these negatives in water. Simply keep them wet (lying on a solid support) by means of a spray head. Your stripping tables should be situated right next to the stripping sink flush against the darkroom wall and near enough to a negative drying oven, metal supply, footshear, printing sink and whirler to be convenient.

Printing Equipment Engineer

"I've learned a great lesson from this. Never try to steal big printing equipment."

Movable Partitions

Look into the matter of movable steel partitions for your departmental enclosures. They are admittedly more costly initially than standard construction, but in the long run the feature of indestructibility makes for a safe investment. They are sprayed in an acid and alkali proof finish, thus are suitable for any enclosure, from darkroom to etching room.

The etching room is the most consistently misarranged department in the entire photoengraving plant, but it is the easiest to set up from a machinery and work load standpoint. Considerable skill is required in this department. At the same time it is a tedious process since the procedures are repeated over and over again. Much of the time is spent in simply moving the work into position for the next operation. When anything is moved, energy is consumed, fatigue sets in and production falls off. We naturally want to limit these evils as far as practicable. This talk about layouts has to do with production which in the final analysis has a bearing on work. In a pure technical sense, work is defined as force times distance. In other words, when anything is moved any distance, work has been performed. Applying this rule to the etching room where metal is on the move almost continuously, the more we can do to reduce the distance traveled, the better off we are.

Let us assume that the average flat weighs 10 lbs. and that the etcher lifts it 1 ft. 100 times in the course of etching. These are not exactly the prevailing conditions, but they are close enough for our purpose. At any rate, a time and motion study man would break this situation down. He would come up with the suggestion that you reduce as many of these conditions as you can because your etcher has generated something like ½ of a horsepower per flat—and too much of that power is wasted.

We can reduce the weight of the metal by switching to magnesium, thus requiring less force. We can reduce the distance by looking into more carefully engineered equipment and by placing it more intelligently.

He might suggest a layout something on the order of the one shown in Fig. 2. The first step is the etching machine where our engraver is applying the first bite. This particular machine is of the no stoop, no squat type, with the following features:

1. No lost motion turning off the motor at inspection time.
2. Foot pedal operated rinse.
3. Eye level inspection.

which add up to less time and less horsepower.

The Etching Room

In Fig. 2 are indicated by diagram an etching machine, a powder box, a stove and a plate cooler. After the engraver takes his first bite in the etching machines the plate, of course, is removed for it,

first powdering. It is contemplated that the powder box is equipped with a powerful motor which sucks vagrant powder into self-contained Nylon bags for later disposal. In this diagram, the oven and cooler are hooked in tandem. The etcher places the plate (or flat) which he has removed from the etching machine upon the stove to raise its temperature to permit dragon's blood applied in the powder box to adhere to the plate to form insulation against the action of the acid in the etching machine. After the first powdering and burning has been completed, the etcher cools the plate on the cooler and returns the plate to the etching machine for the second bite. In the tandem oven-cooler, the plateholder in the oven section oscillates to assure an even burn-in. All burners ignite simultaneously and automatically when the plate is in position. A timer in the oven cuts off the gas at any interval desired. The plate is withdrawn from the oven on its holder and is placed in the cooler. The plate is guided from the holder to the cooler, momentum carrying most of the load. The etcher is now ready to return the plate to the etching machine for the second bite. The powdering process is repeated for as many bites as are required. You can see plainly that with first class equipment in prime position, that this process practically defies simplification. All we can do is to streamline motions and reduce the handling distances involved.

Acid Waste Neutralizer

The photoengraving business is subject to trends just like any other business. Several years ago the city of Cincinnati revised a section of its sewage disposal code. It prohibits dumping nitric acid waste into the city sewer system. Two engraving plants in the process of re-locating were caught by this new law and asked us for help. We developed a nitric acid neutralizer which reduces machine waste to a neutral pH thus satisfying the city fathers.

Aluminum-Backed Plate—Carl N. Becker (left) and Walter C. Deye examine a curved aluminum - backed plate during a recent meeting of the International Assoc. of Electrotypers and Stereotypers in Dayton, O. Becker is president of the association and president, Becker Electrotype Co., Milwaukee. Deye is second vice president of the association and secretary, Quality Electrotype Co., Cincinnati.

Education Program Sponsored by IAES

LAUNCHING of an educational program to present the advantages of letterpress printing was authorized by the International Assoc. of Electrotypers & Stereotypers at its annual spring conference, Apr. 25 and 26 in Dayton, O.

The nationwide publicity plan will embrace not only the association's products but the position of letterpress in the graphic arts field. Carl Becker, IAES president, said the basic aim of the educational program will be to acquaint present and potential users of printing with the advantages of the letterpress method in speed, precision and quality.

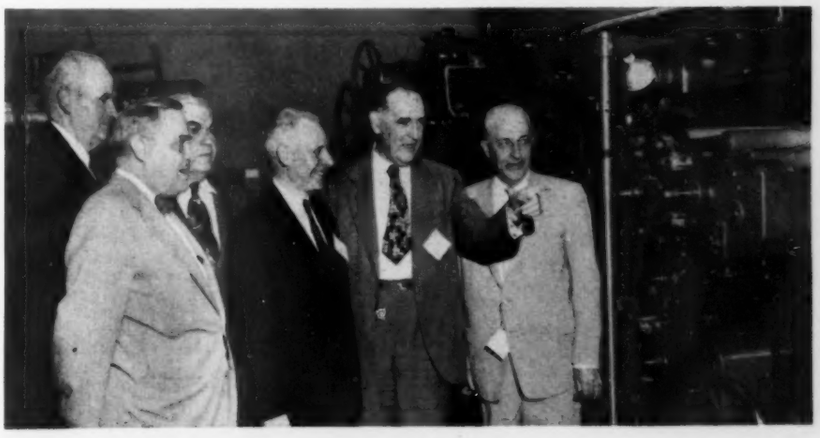
Becker, president of the Becker Electrotype Company, Milwaukee, continued by saying, "Our feeling is that the letterpress industry has rested too long on its laurels. Letterpress sets the standard of quality for the entire printing industry, as it has ever since the days of Gutenberg's Bible. But, because of the tremendous growth in printing since World War II and the introduction of new processes with a confusion of claims and counter-claims, we feel that the time has come for an intelligent, positive program of information to get the facts to the people who need them."

Becker said the IAES program will be aimed at "the young men in college and industry who are the future specifiers of printing" as well as at those presently in that position.

Featured speakers at the meeting were I. D. Robbins, consultant to the Graphic Arts, New York; and William F. Gutwein, labor relations consultant, Louisville, Ky. Robbins discussed the growth of the printing industry and present-day market breakdowns among the various processes. He is currently carrying on a research investigation into the market situation. Gutwein discussed the vital question of giving more information to foremen so that they may better fill the role of agents of management.

A call for better understanding between pressrooms and electrotypers was issued by F. M. Green of the Patton Manufacturing Company, Springfield, O. R. P. Nevers, American Brass Co. said that contrary to the prevailing belief that copper of the highest purity makes the best anode for acid-copper plating, it is shown that far superior anode characteristics can be obtained with coppers containing small amounts of certain additional elements. Floyd D. Keller of R. Lavin & Sons discussed the use of the Lavincast and wrought anodes containing phosphorous.

Edward I. Peters, Process Engineering Company, Skokie, Ill., said that anyone contemplating the installation of a plating bath temperature control system should make a careful study of area conditions in order to get the most economi-



Knights of Columbus Hold Open House in New Plant—Over 200 Craftsmen from Connecticut attended a recent open house sponsored by the Knights of Columbus in their new printing plant for the K. of C. monthly magazine, *Columbia*. Picture here are officials of the Knights of Columbus and Connecticut Craftsmen with a new five color Cottrell press which will be used in the production of *Columbia* covers. Left to right are: William Porter, general manager of the new plant; Dr. Gerald Lunz, supreme physician of the K. of C.; Harry Kener, secretary of the New Haven craftsmen; Raymond A. Langlois, president of New Haven craftsmen; Luke E. Hart, supreme knight of the K. of C., and William J. Jacob, vice president of the New Haven club.

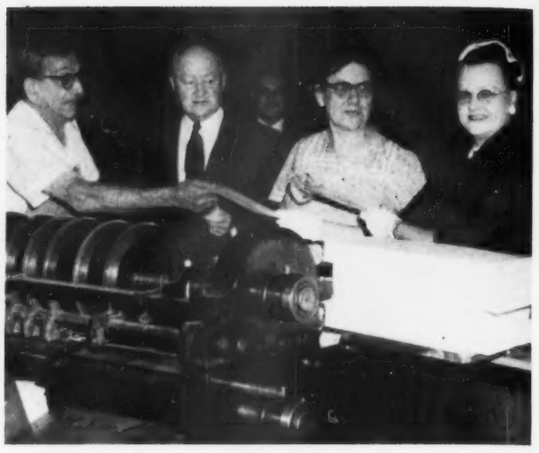
cal and best performing installation possible.

The advantages of the "aluminum sandwich plate" were reported by Joseph C. Ashmead II, Neenah Electrotype Company, Neenah, Wis. He said they are light weight, dimensionally accurate, stronger, and provide better cylinder fit and perfect register. In his company's experience with aluminum, Ashmead said, there has never been a cracked plate or delamination.

Ralph Daugherty, sales representative, Patton Manufacturing Company, Springfield, Ohio, explained the operation of the "Bishop Curving Die" which can take an electrotype plate cold and curve it non-stretch. He cautioned that it was not as simple as it may sound. The operator must get a perfect cut, perfect fit and perfect squareness of the plate to the die.

The conference was attended by 187 delegates and guests.

Please take a look at your address on the wrapper in which *Printing Equipment Engineer* is sent to you at your place of employment. If it isn't correct, please tell us about it on a postcard.



Rosback Contest Winner Chosen — Winner of the Rosback contest to locate the oldest Rosback Round Hole Rotary Perforator still in active use is the Charles A. Stratton Co., New York, N. Y. The machine is Serial No. 46, purchased on Sept. 24, 1914. In the photo, from left to right, and receiving the awards, are Michael Dittola, plant superintendent; Daniel W. Cunningham, company president; Carrie Spinner, operator of the perforator. Presenting the awards is Mrs. Robert C. Kinney, treasurer of F. P. Rosback Co.

Legibility of Print

(By M. S. Kantrowitz, Chairman, Research Committee Washington (D.C.) Club of Printing House Craftsmen Inc.)

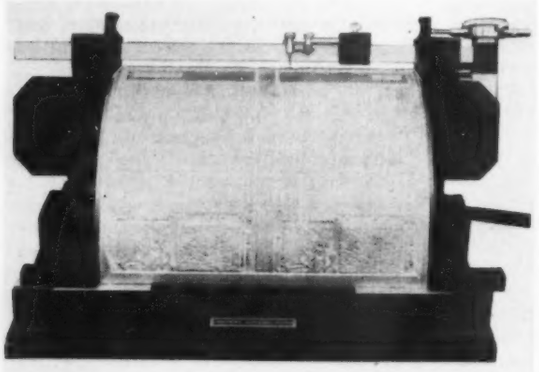
Legibility of print includes the factors of visibility and readability. These functions involve not only light reflectance which is scientifically measurable by critical standards, but also ocular reactions which may vary widely with individuals or races of peoples. Thus, there appear to be ocular and psychological factors combined with habits or training which complicate the problem for solution by simple standards.

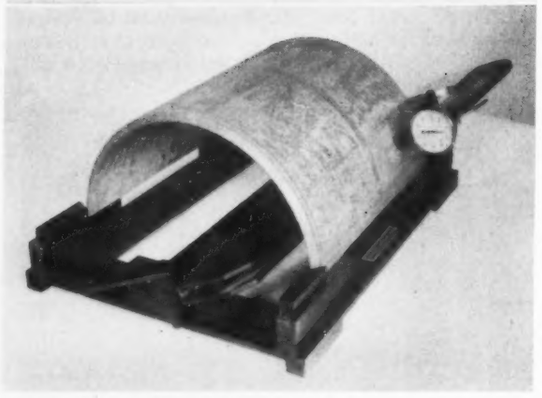
The subject requires a long range study from several angles. Correct conclusions could only be drawn from the collaborative studies of physicists (light engineers), oculists, physiologists, psychologists, typographers, type designers, printers, and manufacturers of inks, papers, etc.

There appears to be some difference of opinion as to the most desirable color of paper from the point of view of reducing eyestrain over long periods of time in reading. Buff or light cream color and very light tints of green appear to lead in popularity.

The color of ink and the background also have been given much consideration and tests indicate that the maximum of contrast, which is black on white, is best for reading when it is done for relatively short periods. When reading is done for extended periods, a cream tinted paper is desirable.

In a report prepared by Lucien A. Legros of London, England, for the Committee on Type Faces, the following statement is made: "The color of paper is of great importance in obtaining the necessary contrast between ink and paper. Generally, the other requirements are that the paper shall not be rough as to obtain a ragged impression of the type and it should not be so smooth as to reflect a definite beam of light. For ordinary printing in black ink, the paper should be white or only very slightly colored; for covers and advertisements, light green . . . . is generally found most restful for the eyes."





For Checking Curved Plates—The Alico Check-A-Plate, manufactured by Alico, Incorporated, is an instrument especially designed for accurately checking curved printing plates. With the instrument the dimensions of a plate, such as thickness, width and non-printing area depth may be measured accurately. It is also used to check color register in a set of plates as well as the margins.

In the top section of the accompanying illustration, a curved plate is shown in gauging position on the Check-A-Plate. The width checking gauge apparatus is connected by a beam over the plate. The plate is measured from one beveled edge to the other. At upper right is the dial gauge which indicates whether the plate is the same width as a master gauge, or if it is over or undersize. The master gauge is provided to keep a record of the width required to suit the press cylinder lockup and margins.

The adjustable pointer shown on the beam above the plate in the upper picture is used for checking register of color plates. After setting the pointer to a color location on the key plate and then placing it on a color plate in the same location, any error in side register can be determined before plates are placed on the press cylinders.

In the lower section of the accompanying illustration the Check-A-Plate instrument has been arranged with its integral parts to check the thickness of a curved plate. The thickness can be measured accurately at any location around and across the plate's surface. The dial gauge indicates any thickness error in 0.001 in. readings. Pre-determined spring pressure regulates the pressure of the contact point and is independent of the operator's feel. A gauge block of accurate plate thickness is provided for setting the gauge dial to zero.

Depth in the non-printing areas of the plate can be measured by substituting a special point for the regular point. The dial is first set to zero with the special point resting on the printing surface of the plate. The non-printing depth is then indicated when the special point is dropped to the desired area.

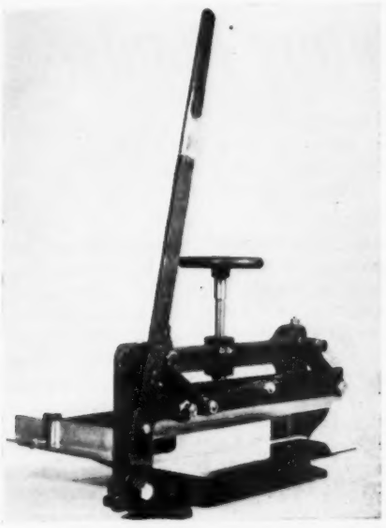
A special cabinet is furnished. It is approx. 24 in. wide, by 16 in. deep, and the measurement from floor to top of the instrument in position on the plate is approx. 44 in. For further information please mention PEE No. 534 in your request.

Robbins Retires—Percy I. Robbins, for the past five years the sales representative of Heidelberg Eastern, Inc., in Connecticut, has announced his retirement. Archie B. Sneider is Robbins' successor in Connecticut. He recently completed his training with Heidelberg Eastern.

SNEIDER

14 in. Paper Cutter

A paper cutter, to cut paper and trim jobs up to 14 in., designed for the small duplicating, offset and reproduction equipment field, was announced by Michael Lith, Inc. The balanced lever is auto-



matically locked by a safety latch when returned to normal position. A permanent rule enables setting the back gauge quickly to the measurement desired. For further details, please mention PEE No. 409 in your request.

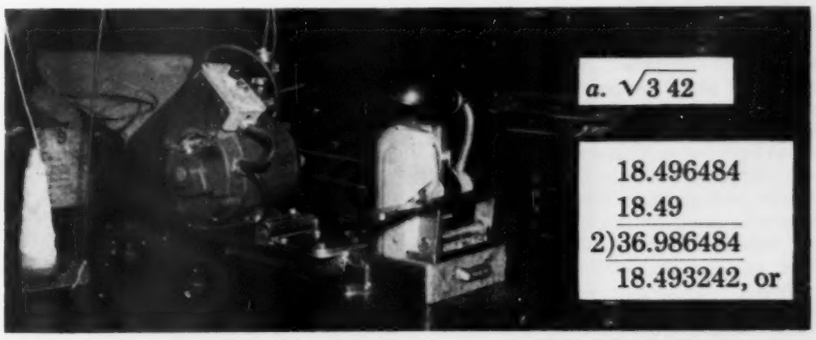
Book in Map Form—Third in Harris-Seybold Co.'s series of midyear calendars illustrating a book with a colorful picture-map is the 1955-56 edition. This is illustrated with "The Adventures of Robin Hood and His Merry Men." The original painting was done by Everett Henry after extensive research into the life and legend of the 12th-century Davy Crockett. Here are Sherwood Forest, Little John, King Richard and the Sheriff of Nottingham in lively color. The calendar was produced by Brown & Bigelow Co., St. Paul, Minn. Fifty percent rag content ivory stock was used; the calendar measures approx. 27 in. by 31 in. The supply of the preceding two map-of-a-book calendars, *The Adventures of Tom Sawyer* and *Treasure Island*, is completely exhausted. For a copy of the Robin Hood calendar while they last, please mention PEE No. 535 in your request.

Canadian Printing Education

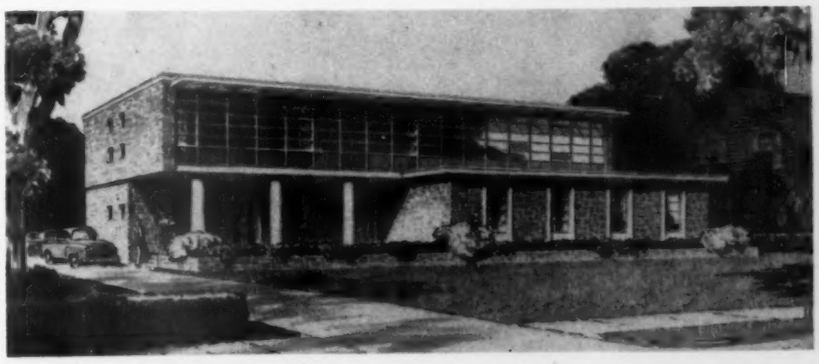
Students of printing at Ryerson Institute of Technology, Toronto, Ont., in preparing a booklet on printing education in Canada, reproduced a talk given by Charles R. Conquergood, president of Canada Printing Ink Co., Ltd. The lack of interest of young people in the printing field has become predominate enough that plant managers all over Canada, as well as the United States, are having difficulty in getting competent people to fill the places of retiring printers. Proper education, according to Conquergood, has become a necessity. The problem is partially solved by some of the Canadian schools such as Ryerson and the School of Graphic Arts in Montreal. Education in printing is not only something acquired at schools; Craftsmen's Clubs, conventions and conferences, and printing trade supply houses and trade magazines play an important part in teaching modern technology. Only with the cooperation of many individuals will an increase in number as well as quality of well-educated and trained personnel be obtained.

LET OTHERS READ IT

The growing demand for copies of *Printing Equipment Engineer* makes it impossible to fill requests in every case. As a regular recipient, won't you please let other executives, as well as any promising future executive employees in your plant, read this copy when you are finished with it?



Neatly Done—and Quickly—In the composing room of the Kingsport (Tenn.) Press book manufacturing plant, a Rouse Vertical Rotary Mitering Machine has been modified especially for cutting radical lines as well as division and total lines in mathematical table composition of any kind. Formerly, explained Composing Room Foreman William Hagan, the rules were cut to desired length with a knife, but since a knife blade is wedge shaped, it tended to spread the rule face where cut. The inset line illustrations show how closely a rule cut with the modified miterer can be fitted next to a radical and how neat it looks when used under a column of figures.



PNPA Home to be Erected Soon—G. A. Harshman, general manager of the Sharon (Pa.) *Herald* and president of the Pennsylvania Newspaper Publishers' Assoc., announced approval by the PNPA executive committee for the construction of a two story office building of the organization at 2717 N. Front St., Harrisburg, Pa. This permanent home of the association, which represents 134 daily, 202 weekly and 14 Sunday newspapers, is to be built on a 110 ft. by 200 ft. plot, and consists of a basement, first and second floors, and contains approx. 9500 sq. ft. of floor area. Drawings and specifications are by the architectural firm of Lawrie & Green.

Ways of Controlling Atmospheric Conditions in Printing Plants

By FRANCIS A. WESTBROOK

II—DE-HUMIDIFICATION

DE-HUMIDIFYING units are also available which employ different methods of removing excessive moisture from the atmosphere of the room. One of these (Fig. 6) made by the Walton Laboratories, Inc., and distributed by the Abbeon Supply Co., operates on the principle of condensing moisture by means of electric refrigeration. It consists of a refrigerating element and a fan which draws in the excessively moist and warm air of the room and passes it over the cold surfaces, thus causing the moisture to condense and drip into a container, which may be connected with the sewer. A single unit can service about 13,500 cu. ft. of enclosed space. If the space is larger, or the amount of moisture which must be removed more than one of the units can handle, two or more may be used and located at points in the area where they will be most effective. The units are small, measuring 13 in. by 13 in. by 29½ in. high.

Migrating Moisture

It is worth bearing in mind that although excessive humidity in the room is most often caused by outside atmospheric conditions, there are other causes. For instance, paper which has been stored in an area where it has absorbed too much moisture will, when placed in a drier area, give up some of its moisture. Consequently to maintain the desired relative humidity of the drying area it is necessary to remove some of the moisture in the air. As the de-humidifying units have automatic controls for starting when the relative humidity becomes too high and stopping them when it has been suitably lowered, their operation does not depend on anybody keeping watch of instruments.

De-humidifying units large enough to care for areas up to 40,000 cu. ft. and small enough for 6000 cu. ft. are also available. One of the smaller ones is shown in Fig. 6. Such units are also suited for areas in old buildings where air conditioning is impracticable.

Chemical De-humidifiers

Chemical type de-humidifiers are also on the market. These use various dessicants which extract moisture from the air by absorption or adsorption. In the latter process air to be dried is drawn through a series of beds in which a dry ceramic-like dessicant, silica gel or actuated alumina, is laid. The porous material absorbs moisture from the air passing through it. When the beds become saturated reactivation is accomplished by passing hot products of combustion through them. Thus the material is heated up to 270 deg. F. and the adsorbed moisture is driven off. Sometimes separate beds are used for large installations and the air flow and reactivation cycle controlled by manual dampers. In offset printing plants the rotating drum type is more usually found. The drum is separated into sections and while one part is drying the air stream another section is being reactivated and a third cooled.

The second process, absorption, extracts moisture from the air by a substance with a lower vapor pressure and by chemical, physical, or both, changes of the absorbant. The absorbant could be, originally, in either a solid state or as a concentrated solution at a certain specified temperature. During the cycle the solid turns into a solution or the concentrated solution becomes diluted. Calcium chloride is the most commonly used solid absorbant. For continuity of the process the melted solid has to be regularly replaced.

Of liquid absorbants, lithium chloride, as employed in the Kathabar units made by the Surface Combustion Corp., is a typical example. These have been used with marked success in a number of offset printing plants, which warrants a more detailed description of them. The operational cycle of these units is similar to the cycle of other liquid absorbants such as lithium bromide, ethylene glycol, etc.

In the Kathabar units, Fig. 7, air to be conditioned passes into an air washer chamber, on the right, where it contacts a flood of absorbent solution. At the same time both the air and the solution pass over cooling coils. The coolant in these coils, which is water at 85 deg. or less, plays an important role. The moisture absorbing capacity of this solution is a function of its concentration and temperature. Usually the concentration is set and thus the coolant, its temperature especially chosen and flow regulated, establishes automatically the required amount of moisture extraction to be done.

After passing over the coils, the dried air passes on to the distribution system where it can be mixed with recirculated air if desired and heated or cooled by tempering coils as necessary. The solution falls into a sump from which it is automatically pumped back to the flooding nozzles in the air washer chamber for further humidification passes.

Reactivation of the solution is also automatic. The pump also continually

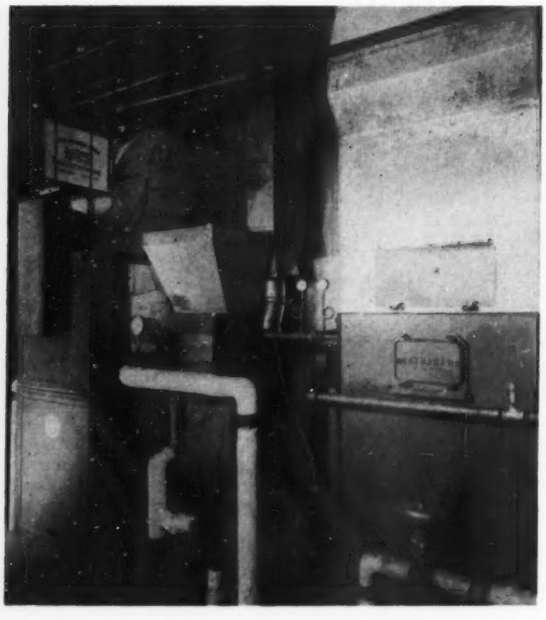


Fig. 6.—Kathabar De-Humidifying Unit. Air to be conditioned passes into an air washer chamber (right) where it contacts a flood of absorbent solution. Simultaneously, the air and the solution pass over cooling units.

directs a small portion of the solution, from 10% to 15%, to a separate chamber which has a similar cycle. When the solution becomes diluted, a steam valve is opened and low pressure steam is sent into the coils in this regenerator chamber (middle tower in Fig. 7). This heats the sprayed solution and forces it to give up its absorbed moisture. This excess moisture is entrained by a scavenger air stream which purges it to the outside atmosphere. The re-concentrated solution falls once again into the common sump. When the solution level returns to its initial level the steam valve closes.

Fig. 7.—Multiple installation of G-E floor mounted air conditioning units (one at left, other at right) of floor mounted models in plant of Modern Handicraft, Inc., Kansas City, Mo.

Complete Air Conditioning

Complete air conditioning is sometimes difficult, if not impossible, to install in old buildings, and it is expensive due to the refrigerating machinery and duct system. Nor is it always necessary, although practically always very helpful. Hence, the wide use of the humidifiers and de-humidifiers which have been considered.

For the smaller printers and other Graphic Arts plants, who need the benefits of air conditioning as much as the big ones, the factory made packaged air conditioning units give good results. There are several makes and designs on the market.

G-E Packaged Units

The General Electric Packaged Air Conditioners (Fig. 7) consist of a number of floor mounted models of varying capacities ranging from 3 T. to 15 T. capacity. Water rate, according to individual unit selected, is from 287 to 1460 gph. The All-in-One Cooling Systems slide out for easy servicing plus completely hermetic sealed refrigeration machines. Units are supplied with muggy weather controls to give higher moisture removal on humid days. The heating coil can be obtained as an accessory and can be used with steam or hot water and a three-way directional air distributor for free air delivery within the conditioned space. Overall dimensions of the cabinets vary according to the model selected. The 3 T. cabinet is 82¼ in. high with distributor, by 34 in. wide by 21⅝ in. deep. The 15 T. cabinet measures 90⅝ in. high with distributor, by 77⅜ in. wide, by 28⅞ in. deep.

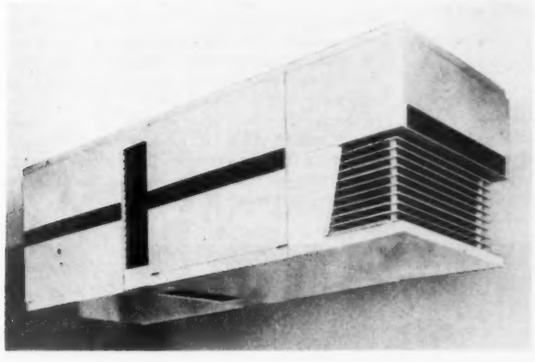


Fig. 8.—View of General Electric air-cooled horizontal packaged air conditioner. These units may be suspended from the ceiling or placed on a shelf. This gets the units up out of the way in plants where floor space is at a premium. Overall dimensions of the 3 T. model cabinet are: Length with distributor, 56½ in.; width is 34 in., and height is 28⅝ in. Dimensions of the 7½ T. model are: Length with distributor, 56½ in.; width is 55 in., and height is 28⅝ in.

G-E Horizontal Elevated Models

General Electric recently announced packaged air conditioners in the use of which no floor space is required. The units may be suspended from the ceiling or may be shelf-mounted in elevated position. (Fig. 8) Thus in plants where floor space is at a premium, installation of the horizontal models involves no sacrifice of floor space. The units are available in 3 T., 5 T., and 7½ T. capacities. The units are available in water-cooled and air-cooled (waterless) models.

The same hermetically sealed conditioning unit used in floor models is used in the new water-cooled units. Motor, compressor and condenser are permanently sealed in steel and lubricated for life. The entire refrigeration system is replaceable. The motor, compressor, fans and fan drives are resiliently mounted. Fans are extra large to move larger air volume more quietly. A completely automatic electrically activated muggy weather control has been added to give even higher moisture removal on humid days. Accessories include a heating coil which can be used with steam or hot water and a three-way directional air distributor for free air delivery within the conditioned space. The new line of horizontal models will supplement G-E's present line of floor models. It has been announced that production of horizontal models will be limited during 1955.

(*Continued on Page 84*)

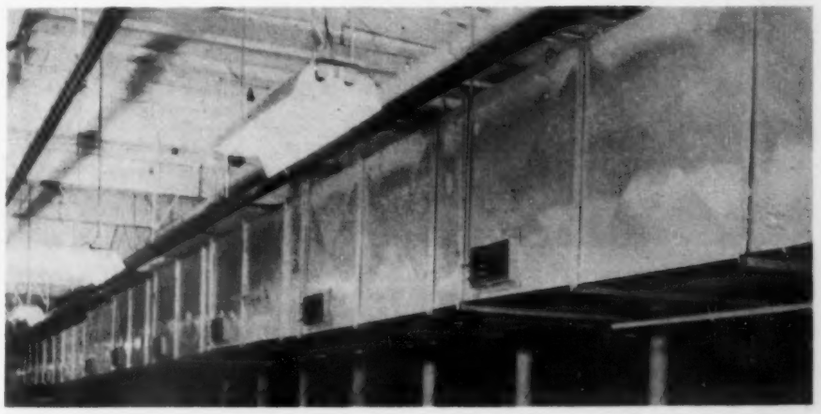


Fig. 9.—Bahnson ductwork with grilles for central station air conditioning system.

Tenanon—*Its qualities when used in r.o.p. color stereotype mat molding—Non-shrink qualities together with anticipated reduction in plate routing time.*

By ERWIN T. GIANNONI*

**Stereotype Supt., Chicago* Tribune. *Abstract of paper presented before ANPA Mechanical Conference, Edgewater Beach Hotel, Chicago, June 1955.*

TENANON was introduced to the trade in November, 1954 by the Tenak Products Co. who, working with the Stereotype Dept. of the Chicago Cuneo Plant, developed and adapted it for use in direct pressure hot molding.

The material, as furnished to Tenak Products Co. by Kimberly-Clark, is similar to Kim-Preg Mat-Pak material inasmuch as it is a laminated sheet of resin impregnated tissues. It is then further treated by Tenak. An adhesive is applied on one side of the material allowing it to adhere to the back of the mat. Its non-shrink qualities when thoroughly dried under direct pressure tend to retard the slight shrinkage we have found exists in any mat we cast.

No-Shrink Qualities and Routing Reduction

I was very fortunate in being invited to the Cuneo Plant shortly after they started working with Tenanon. Upon my first visit, it was quite evident that Tenanon had the same no-pak qualities as Kem Preg, with which I'm sure you are all familiar. Add the fact that it was being used on hot molding and you can readily see why it appeared to be ideal for r.o.p. color mat molding and worthy of an all out effort to adapt it to our own use. Preliminary tests showed the immediate possibility of eliminating some of the tedious and time-consuming routing problems, through its no-pak qualities, plus some of the time-consuming frisketing of dead areas necessary in the engraving room before proofing. We found we could readily use the material with our new hard molding combination.

Before going into the mechanics of Tenanon, I would like to explain our thoughts on color molding combinations.

Molding Combinations

Up to last October, the Stereotype Dept. of the *Tribune* favored a soft molding combination. That is to say, our color molding has always been done with an extremely moist mat, soft combination, and low pressure. We have always been proud of our reproduction, even though much of the credit was due to excessive and time-consuming work on the pattern plates, plus excessive and time-consuming makeready on mats.

In all our experiments with hard molding combinations, we could never achieve the desired open space depth and consequently created additional routing on stereotype plates, without achieving any noticeable improvement in printing. Prior to the introduction of Tenanon, we again tried to improve our molding technique by experimenting with the use of ordinary paste treated 20 lb. blotting paper molded directly on the back of the mat. By using our hard molding combination with the blotting paper, we immediately noticed a lessening of the need for makeready, and even though the space depth was not improved to any great extent, we felt the savings in makeready time, together with the slight improvement in printing, justified our using this combination, even though additional routing time was required.

Concentrated on Quality

The first real test (of Tenanon) under normal press conditions took place late in December 1954. The noticeable improvement in the resultant printing and the fact that it is non-shrink, when thoroughly dried, immediately prompted the discarding for the time being of any thought of lessening the routing by the mat-pak means and caused us to concentrate on improving the quality of printing. Practically all of our runs and experiments have to date been concentrated to this end.

Even in the early stages of our tests, comparative press runs using A and B pages of Tenanon backed mats versus our regular mats proved the Tenanon molding process as being superior to the old.

Committee Chairmen of the 1955 Craftsmen's Convention—Seated (left to right) are Treasurer Robert E. Thiele, superintendent, U. S. Printing & Lithograph Co.; General Chairman Lee Augustine, vice president, Printing Machinery Co.; Vice Chairman Wilbert Rosenthal, vice president, S. Rosenthal & Co.; Technical Program Chairman A. E. Price, sales manager, Ander Chemical Co. Standing in the second row are Transportation Chairman Carl Huether, sales representative, American Printing Ink Co.; Printing Chairman H. E. Pracejus, production executive, McDonald Printing Co.; Entertainment Chairman George A. Vitt, vice president, Wortman Roller Co.; Exhibits Chairman Robert C. Wolf, superintendent, Richardson-Taylor-Globe Corp.; Pre-convention Registration Chairman James C. Fergus, sales manager, Chatfield Paper Co. Standing in the third row are Plant Visitation Chairman H. Eugene Cramer, superintendent, Garner Board & Carton Co.; Souvenirs Chairman George Wagner, vice president, Nessler & Wagner Co.; and Convention Registration Chairman Verne Crane, sales representative, Nessler & Wagner Co. Not included in this picture was Arrangements Chairman Owen Sexton, general manager, H. Blacker Printing Inks, Inc.

Overcoming Insulation Problem

Under conditions which slowed our operation considerably, we used Tenanon exclusively, from early January through February. At this time the problem of heat and cooling control became so great it was necessary to discard its use and make further tests, trying to overcome the casting difficulties created by the tremendous insulating qualities of the material. This problem was partially overcome by lowering our metal temperature to 565 deg. and changing our cooling system to allow the operator more freedom in regulating the cooling of plates and timing of each casting cycle. The Sta-Hiing of mats before casting has also helped considerably. At the present time, the Tenak Products Co. is doing its best to increase conductivity of the material to help this situation.

Noticeable Qualities

In spite of this remaining problem, we have been using Tenanon exclusively since early March. There is no doubt in our minds that it tends to hold the true tone value of the original engraving. It also has a natural tendency to allow the solids and large type areas to print much better than heretofore possible without extreme amounts of makeready. Yet it still allows for makeready when and if necessary. Another feature is that the ever present problem of hard edges, especially in the vignette areas, is lessened considerably.

Lessening of Press Pre-register

Our pressroom reports a lessening of pre-register problems. We still plate the presses by using sets of plates cast in numerical order. However, we can, if necessary, run the second cast from the red mat together with the fifteenth or twentieth mat of the blue mat and not have the old fear of the eyes or lips in a face being out of register to any great extent.

Our only laboratory test to date has been the measuring of the highlight dot. This test shows a 10% to 15% smaller dot in the Tenanon backed mat than in the non-backed mat of the same subject. While I do not place too much emphasis on this test, it, however, is worthy of mention, as we find it much easier to reproduce and hold the fine highlight dot furnished in the pattern plates.

Our direct pressure molding procedure is to place the 0.040 in. Tenanon sheet directly on the back of the mat, followed by a 0.003 in. sheet of Kraft paper. On top of this, a 100 mesh wire screen, followed by a ⅛ in. thick brass plate with 16 holes to the square inch. These holes are made with a No. 59 drill, 0.041 in. diam. On top of this, add any type drying blankets you might prefer.

The softness of the Tenanon allows maintaining the true space and bowl depth of the pattern plate, while using Kraft paper tends to smooth the material and keep it from flaking in the casting operation.

It would be ridiculous to advise what pressure is best suited to this operation because our experiments prove the main objective to be the thinning out of the mat and the attached Tenanon. Strange as it seems, excessive pressure does not create any greater problem than that experienced in normal molding procedures.

Can Be Used on All Mats

We have used five different manufacturers' mats in our operation and find the material can be used on all. We have also experimented with thin 0.025 in. mats in an attempt to start our casting operation with a Tenanon backed mat close to the accepted thicknesses of 0.025 in. to 0.028 in. This, we think, is a step in the right direction.

Casting Problems Encountered

A few of the mechanical problems encountered in casting were as follows:

Tenanon increased our mat thickness 0.007 in. and, of course, decreased the plate thickness accordingly, giving us a plate so thin the shaver knife did not cut the ribs. This was corrected by readjusting the box to give a heavier plate. Where only a few casts are necessary, it can be corrected by inserting a sheet of paper of proper thickness in the shaver housing. This increased thickness of mat and material creates a cooling problem, which when added to the insulating qualities of Tenanon, prompts our experiments with a thin mat.

At the *Tribune* we are faced with the problem of sometimes making as many as 22 casts per mat. We have always dried our mats under pressure from 20 min. to 25 min. Even so, we had mat shrinkage of 1/16 in. from the first to second cast, and an additional 1/16 in. from second to the 22nd cast. With the use of Tenanon and the fact that it retards shrinkage, the 1/16 in. from the first to the twentieth cast has been cut in half.

The fact that Tenanon tends to retard the slight mat shrinkage prevalent in color casting has allowed the engraver to rout more dead metal from the pattern plate than heretofore possible.

At present our drying time on all pages is 25 to 30 min. On occasion, the key page is dried longer. We are constantly trying to shorten this drying cycle.

We believe that as we continue these tests, more and more routing time on both the engravings and stereotypes can be eliminated. We are looking forward to the time when more and more r.o.p. color ads, plus spot color, can be stereotyped without fear of distortion due to shrinkage. We feel that as we continue our experiments the time will come when we no longer will have to tell our editors we do not have time to produce color pages.

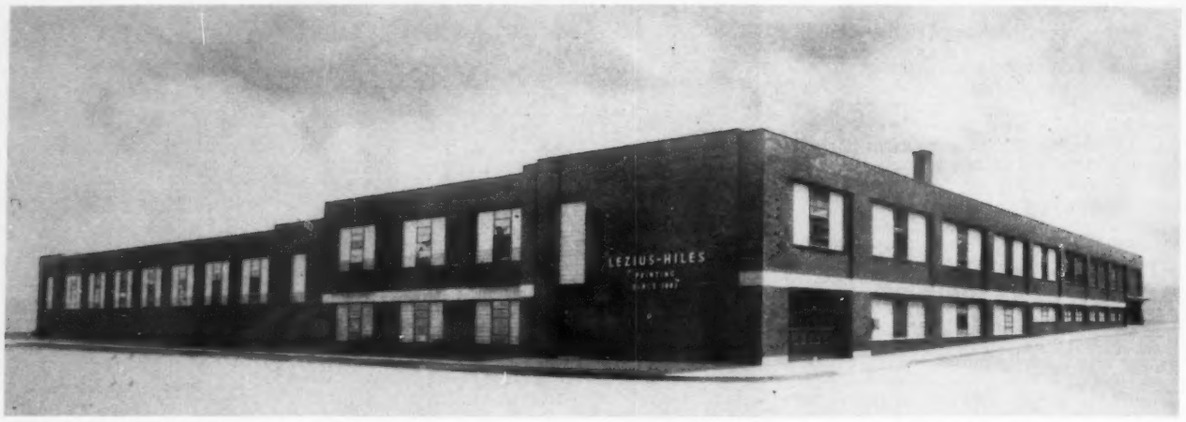
Akron (O.) Club Receives Charter—It was a great day in Akron (Saturday, June 11) when 82 enthusiastic printing executives in the Akron area received their charter from Intl. President Thomas P. Mahoney, as a going and active Craftsman Club. The charter meeting was held at Sanginiti's Restaurant. Approx. 150 men and women were present. It is predicted that the club will shortly attain a membership of over 100.

The program was conducted smoothly under the chairmanship of Robert Hoffman, Director of Printing for the Hoover Company in Canton. Intl. President Mahoney presented the club's charter to Akron Club President Kenneth M. Hiney, sr. Intl. Second Vice President George Wise then inducted the new officers.

One of the highlights of the meeting was the introduction of International Officers in addition to President Mahoney and Second Vice President George Wise who had been previously presented with his wife, Virginia Wise. These were: Intl. Publications Chairman Howard N. Keefe, Cincinnati; Fifth District Deputy Representatives Robert M. Edgar (Pittsburgh) and Loren Askins (Dayton).

In this pictorial layout all persons identified left to right:

1. Howard Keefe, Cincinnati, Intl. Publications Chairman; Loren Askins, (Dayton), Fifth District Deputy Representative; George Wise, Cleveland Intl. Second Vice President; Kenneth Hiney, sr., Akron Club President; Thomas P. Mahoney, Chicago, International President; Robert M. Edgar, Pittsburgh, Fifth District Deputy Representative.
2. Cleveland Club President Arthur Hogling, on behalf of Cleveland Craftsmen, presents handsome gavel to Akron Club President Hiney.
3. Happily, Akron Club President Hiney receives Club Charter from International President Thomas P. Mahoney.
4. In serious moment, Intl. Second Vice President Wise presents President's Pin Member Pins and Golden Book of Craftsmen to Akron Club President Hiney.



Lezius-Hiles Co. Moves to New Location

When Lezius-Hiles Co. moved into new quarters in Cleveland, it doubled its previous floor space to make a total of 50,000 sq. ft. The newly-acquired building is of brick construction. It has been completely revamped inside to house the printing company's business, which consists of 30% offset and 70% letterpress work.

There are cement floors throughout the new Lezius-Hiles plant. Plenty of windows, high ceilings, cool green interior paint and fluorescent lighting make the plant a light airy work place. Elevated Modine heating and air circulating units with thermostatic controls are spotted strategically through the composing room and the press room.

The new Lezius-Hiles' location faces E. 61st St. and extends a full block on Chester Ave. to E. 63rd St. Off-the-street parking is provided for customers (something difficult to obtain in central downtown locations) and a truck loading and unloading dock. The company is in the process of buying property nearby to provide free parking for its employees, too. On the first level of the building (see the diagram) a cafeteria for employees is situated adjacent to 12,000 sq. ft. of paper storage area.

The land on which the plant is situated slopes from the east and south downward toward the northwest corner of the building. That provides the setting for two-story construction on the west and single-story construction on the east end of the building (see the picture above). Stairways and elevators connect the various levels. An entirely separate building houses the maintenance department.

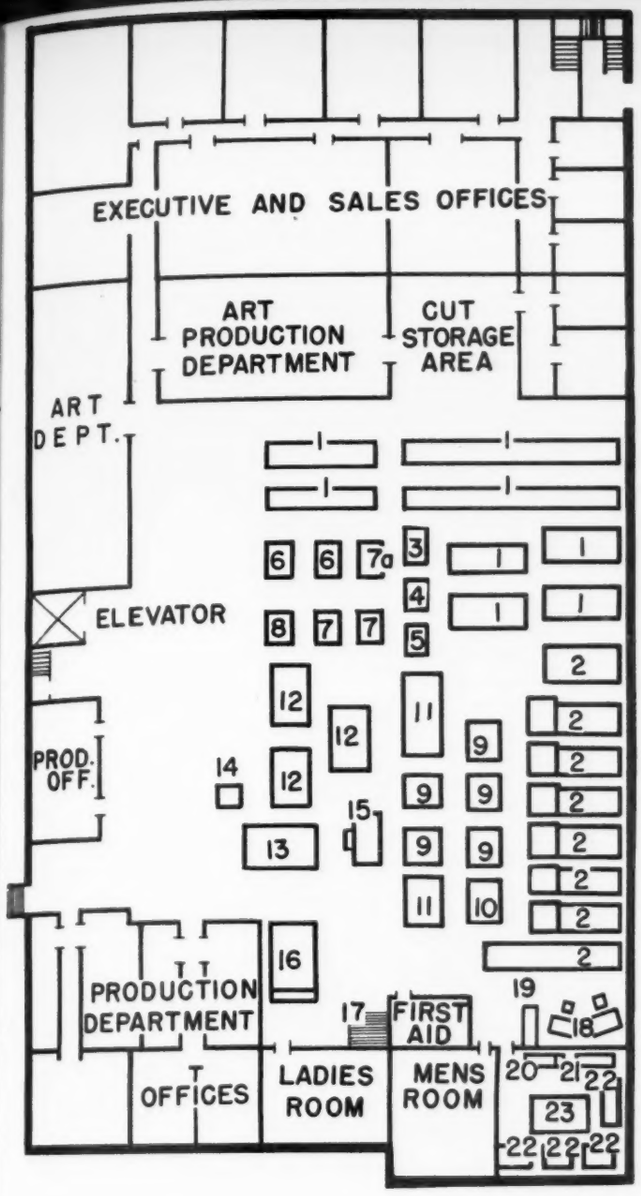
Details of the new plant layout of Lezius-Hiles will be found in the accompanying drawings and key. Note especially the easy work flow lines from the press room to the bindery—just a short distance across the aisle, yet with ample space to move skids of paper around.

Time clocks are located at several points through the work areas to provide for cost control reports. There are five types of time records, each printed on a different colored stock—white for compositors' time records, pink for machine time tickets, orange for press daily records, green for bindery reports, and yellow for shipping and stock reports. Time record forms have spaces provided for inserting the time stamp, job number, name of the job, kind of work in the job, space to indicate chargeable and nonchargeable time and remarks. The press time is figured in units; each unit represents six minutes, ten units to the hour.

Moving from the old location to the new was done, department by department, without serious interruption of the company's printing schedule. That required planning since the firm is one of the largest in northern Ohio (110 employees and $2.5 million in annual sales). The company also had been at its old location (1125 Rockwell Ave., Cleveland, O.) for 40 years before the move.

Preparation of the building and actual moving into the new plant were under the direction of Harry Slorp, for many years plant superintendent of Lezius-Hiles. Presses and Monotype machines as well as other equipment were moved to the new location as a job on each machine was completed at the old location. A special installation crew—Joseph Kuchar Co., Cleveland machinery erecting firm—dismantled the equipment in the old plant and reassembled it in the new locations. Slorp's preplanning included blueprinting the positions of all important pieces of equipment. These positions, plus water, compressed air, electricity and gas outlets, where necessary, were marked on the floor in each department of the new building. The tight moving schedule resulted in minimum loss of production time.

Lezius-Hiles produces books, catalogs, general commercial printing, direct mail literature and color work. The firm is affiliated with A. L. Garber Co., Ashland, O. Principal members of the management are George W. Lezius, president; Carl F. Lezius, chairman; and Mrs. Marie Loder, secretary-treasurer. Other company executives include William J. Fintze, sales manager and creative director, and Joseph A. Chinnici, plant superintendent.

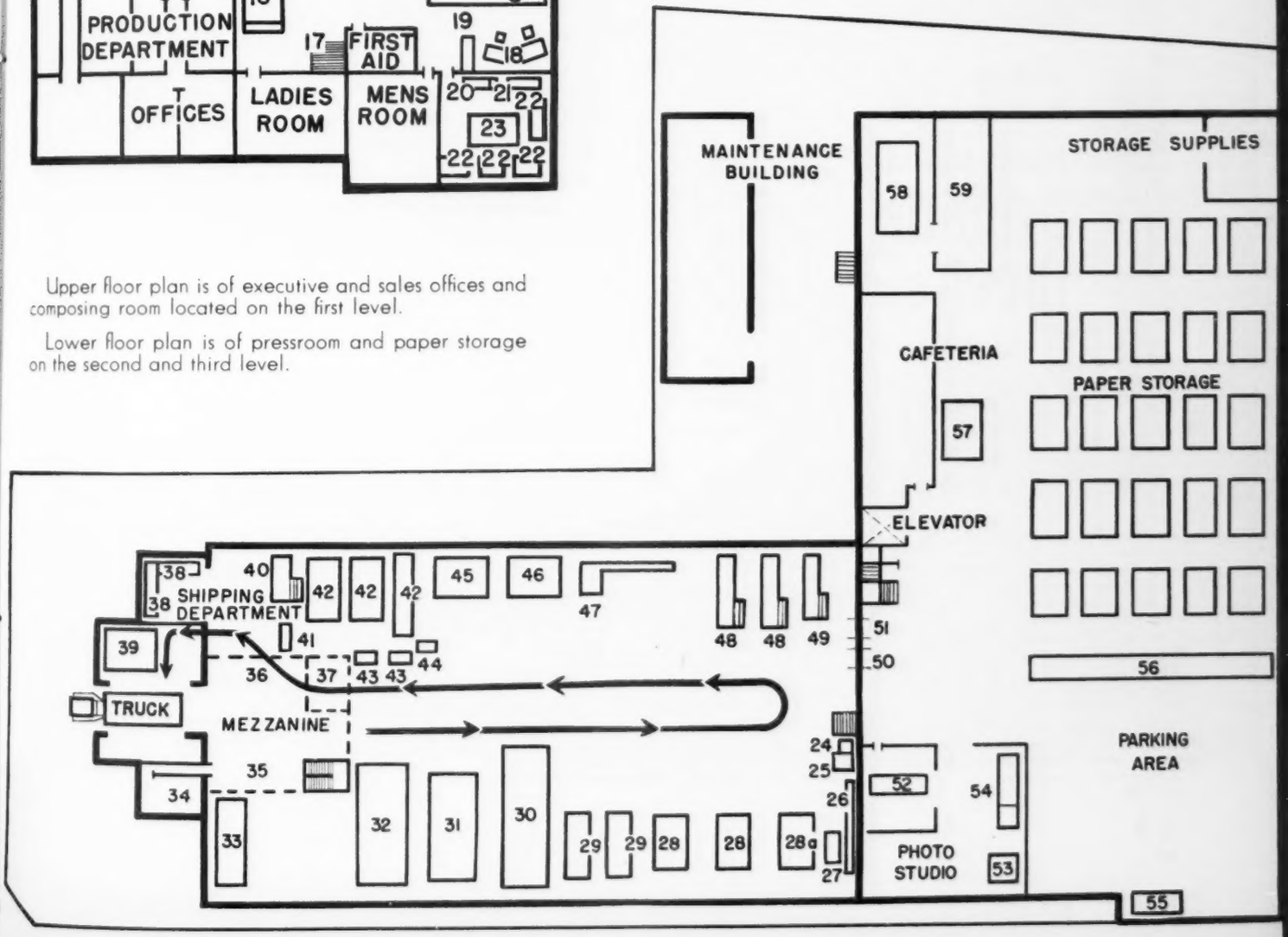


Equipment Identification for Lezius-Hiles Plant

1. Type Storage
2. Type Assembling Cabinets with Work Tops
3. Wood Saw
4. Wood Furniture
5. Metal Furniture
6. 13 in. by 19 in. Miehle Press
7a 12 in. by 18 in. Chandler and Price Press
7. 12 in. by 15 in. Chandler and Price Press
8. 10 in. by 15 in. Heidelberg Press
9. Furniture Rack and Type Cabinet
10. Metal Furniture
11. Proof Press
12. Composing Table
13. Taylor Registerscope
14. Wood Saw
15. Foreman's Desk
16. Craftsman's Lineup Table
17. Chase Rack
18. Monotype Keyboards
19. Monotype Space Rack
20. Monotype Sorts Caster
21. Monotype Material Maker
22. Monotype Composition Caster
23. Work Bench
24. Dumb Waiter
25. Form Rack
26. Ink Cabinet
27. Multilith Press
28a 23 in. by 29 in. Harris Offset Press
28. 22 in. by 34 in. Harris Offset Press
29. 22 in. by 35 in. Kelly Press
30. 38 in. by 56 in. two-color Miehle Press
31. 40 in. by 56 in. one-color Miehle Press
32. 29 in. by 41 in. two-color Miehle Press
33. 32 in. by 45 in. Miehle Press
34. Fire Proof Room for Gas and Oil Storage
35. Locker Room (on mezzanine)
36. Wash Room (on mezzanine)
37. Ink and Roller Room (on mezzanine)
38. Wrapping Table
39. Knocked-Down Carton Storage
40. 17 in. by 22 in. Cleveland Folder
41. Portland Punch
42. Bindery Tables for Handwork
43. Hand Wire Stitchers
44. Challenge Punching Machine
45. 50 in. Seybold Cutter
46. 45 in. Seybold Cutter
47. Christensen Gang Stitcher
48. 25 in. by 38 in. Cleveland Folder
49. 19 in. by 25 in. Cleveland Folder
50. White Waste Chute to First Level
51. Mixed Waste Chute to First Level
52. 8 in. by 10 in. Camera
53. Photostat Machine
54. Darkroom
55. Air Compressor for Monotype Machines
56. Steel Shelving
57. 56 in. Seybold Cutter
58. Boiler Room
59. Storage Room

Upper floor plan is of executive and sales offices and composing room located on the first level.

Lower floor plan is of pressroom and paper storage on the second and third level.



Printing Week Stamp Winner—Emil Georg Sahlin, 296 Delaware Ave., Buffalo, N. Y., was chosen winner of the 1956 Intl. Printing Week Stamp Contest with the accompanying entry. Certificates of honorable mention were awarded to Gerry P. Waldston, 5896 Trans Island Ave., Montreal, Canada; John G. Fitzgerald, Eagle-Tribune Printing Co., 49 Blanchard St., Lawrence, Mass.; and Ralph Marchese, 548 Mt. Prospect Ave., Clifton, N. J. Contest judges were Howard N. King, past president of the Intl. Craftsmen and typographic consultant to Intertype Corporation; D. Walter Wardrop, Yorktowne Adv. Agency; and C. Robert Fowler, Hobson Printing Co., Easton, Pa. Winning awards will be presented by Thomas P. Mahoney, president of the Intl. Association, at the Printing Week Luncheon, Tuesday, Aug. 9, at the Craftsmen's Intl. convention in Cincinnati, O.

Craftsman Poster Winner—John Rile, 411 Conestoga Rd., Wayne, Pa., is winner of the 1956 International Printing Week Poster Contest with the entry shown above. This is a two-color design with the gray tone in the cut above representing the second color. Rile's entry was chosen on Thursday, July 7, 1955. Certificates of honorable mention were awarded to Emil Georg Sahlin, 296 Delaware Ave., Buffalo,

N. Y., (two honorable mentions); and Hyman Spiegel, Darby Printing Co., 24th and Douglas, N. W., Washington, D. C. Judges for the contest were Wayne V. Harsha, editor, *Inland Printer*, William O. Morgan, offset editor, *Graphic Arts Monthly*, and Ralph Karsten, president, Screen Flock Industries, Chicago. Harsha was chairman of the group. Presentations of the awards will be made by Thomas P. Mahoney, president of the International Craftsmen's organization, at the Printing Week Luncheon, Tuesday, Aug. 9, Netherland Plaza Hotel, Cincinnati, O., during the Intl. Craftsmen's convention.

Mail Order Packaging Work Flows Smoothly Via Conveyor Line in Plant of Augsburg Publishing House, Minneapolis, Minn.

Adopting the Ford principle of bringing work to the man, mail orders of printing (such as envelopes, letterheads, announcements, etc.) are handled efficiently in a special department in the Augsburg Publishing House, Minneapolis, Minn. This equipment was designed and installed by Graphic Arts Industry, Inc., under personal supervision of Paul J. Ocken, vice president and general manager. The Augsburg people also print and publish a number of periodicals in volume. This conveyor system is a greatly amplified phase of the R. R. Greer rolling table. This system eliminates physical exertion, lost motion and possible mixing of already separated materials which are handled in volume.

While we cannot give all operations in detail together with measurements and specifications, yet we feel the accompanying picture presentation will indicate to interested readers having similar problems how one printing engineering firm approached the materials handling problem for the Augsburg Publishing House. In this system both roller and flat belt conveyors are used.

1—Beginning of the conveyor line. Here the mail orders are picked up. The order slip and shipping directions are placed with the finished work, each job by itself, in a tote box which is then placed by the operator on the conveyor line.

2—At the left part of this picture, the orders in the tote boxes travel around the curve until they come to the dead end of the conveyor. Then the two checkers shown in the illustration inspect the contents of each tote box and check the orders. They then put the checked orders together with the job in the tote box and place the box on another conveyor located right in front of their work table. The conveyor curves around as shown in Fig. 4. The tote boxes are conveyed down a line along which a number of wrapping tables are stationed. One is shown in Fig. 3.

3—One of the package wrapping units. These wrapping units were designed and built by Graphic Arts Industry, Inc. Note the new and original corrugated paper dispensing device in the upper part of the picture in which is incorporated a unique cutting device. The large drawer is filled with 2 bu. of shredded paper for packing purposes. In the lower part of the table are compartments for holding various size corrugated cartons and mailing tubes. In the fixtures on top the unit are two different widths of wrapping paper and a gummed tape machine. Also shown is an electric label gluing machine. There is one on each wrapping unit. To the right of the unit is a specially designed steel waste container the top edges of which are the same height as the worktop. With one swipe of a hand, the wrapper can clean off the top of the table and sweep the scraps right into the waste container. The wrapping unit is designed to eliminate walking on the part of the wrapping personnel. They simply take one step to the right of the waste container, take a tote box off the conveyor line and wrap the package.

4—Shown here (rear left) is another of the several wrapping tables. Note tote boxes coming around the curve to the checkers. Man at right is weighing packages for Uncle Sam's mail.

5—End of the double conveyor line (upper and lower sections visible at right of the work table's waste receptacle). The material in the tote boxes on the upper sections is to be wrapped. After the package has been wrapped it is placed on the lower conveyor running in the opposite direction. They travel along the lower line to a power belt which pulls them up to waist height. The scaler (at extreme right in Fig. 4) weighs the packages, applies the postage and tosses the packages into a hamper. When full, each hamper is loaded on a truck and is taken to the postoffice. (Hampers are shown at lower right in Fig. 2.)

In this Fig. 5 are shown (from left to right) Dr. Randolph E. Haugan, general manager of Augsburg Publishing House; Paul J. Ocken, vice president and general manager, Graphic Arts Industry, Inc.; Clarence Erickson, head of the shipping department and N. A. Kirkeberg, Augsburg's controller, inspecting one of the floor plan layout sheets.

6—View in thoroughly redesigned and revamped Augsburg pamphlet bindery. A complete floor in the old building was changed to concrete flooring construction, and all of the bindery machinery was located on a streamlined production layout basis. In the bindery mailing section (not shown) publications are addressed by stencil on wrappers by a number of operators. Each operator works in her own cubicle. Worktops are convenient to the operator who works in sitting position. The magazines are counted out and the addressed wrapper is placed over each package. The packages are then placed on a moving conveyor belt. A number of operators at the end of the belt fasten the wrappers and toss the packages into one of the mail sacks grouped opposite the wrapper fastening table.

Elected President—Benjamin P. Foley has been elected president of the Caxton Company, Louisville, Ky. The Fetter Printing Co., Louisville, recently purchased all the outstanding common stock of the Caxton firm. Mrs. Victor Burger, who had operated Caxton Company since the death of her husband, will remain active in the business. Caxton has specialized catalog and advertising printing and display typography. Foley has been in the sales department of Fetter Printing Co. for a year and one-half, and was superintendent of the Masonic Home printing department in Louisville before that.

R.I.T. Department Head—Warren L. Rhodes, engaged in experimental work at R.I.T. since 1951, has been named head of the Graphic Arts Research Department at the Rochester (N. Y.) Institute of Technology. He will assume his new duties in mid-August. Rhodes will direct R.I.T.'s research program of science and technology in Graphic Arts. The new department head replaces Virgil P. Barta, who with his administrative assistant Herbert Morrow, jr., has resigned to enter private business. Rhodes recently returned from Europe where he represented R.I.T. at two international conferences. Rhodes was graduated from the Department of Photography at R.I.T. and also studied at the University of Colorado.

Please take a look at your address on the wrapper in which *Printing Equipment Engineer* is sent. If it isn't correct, tell us about it on a postcard.

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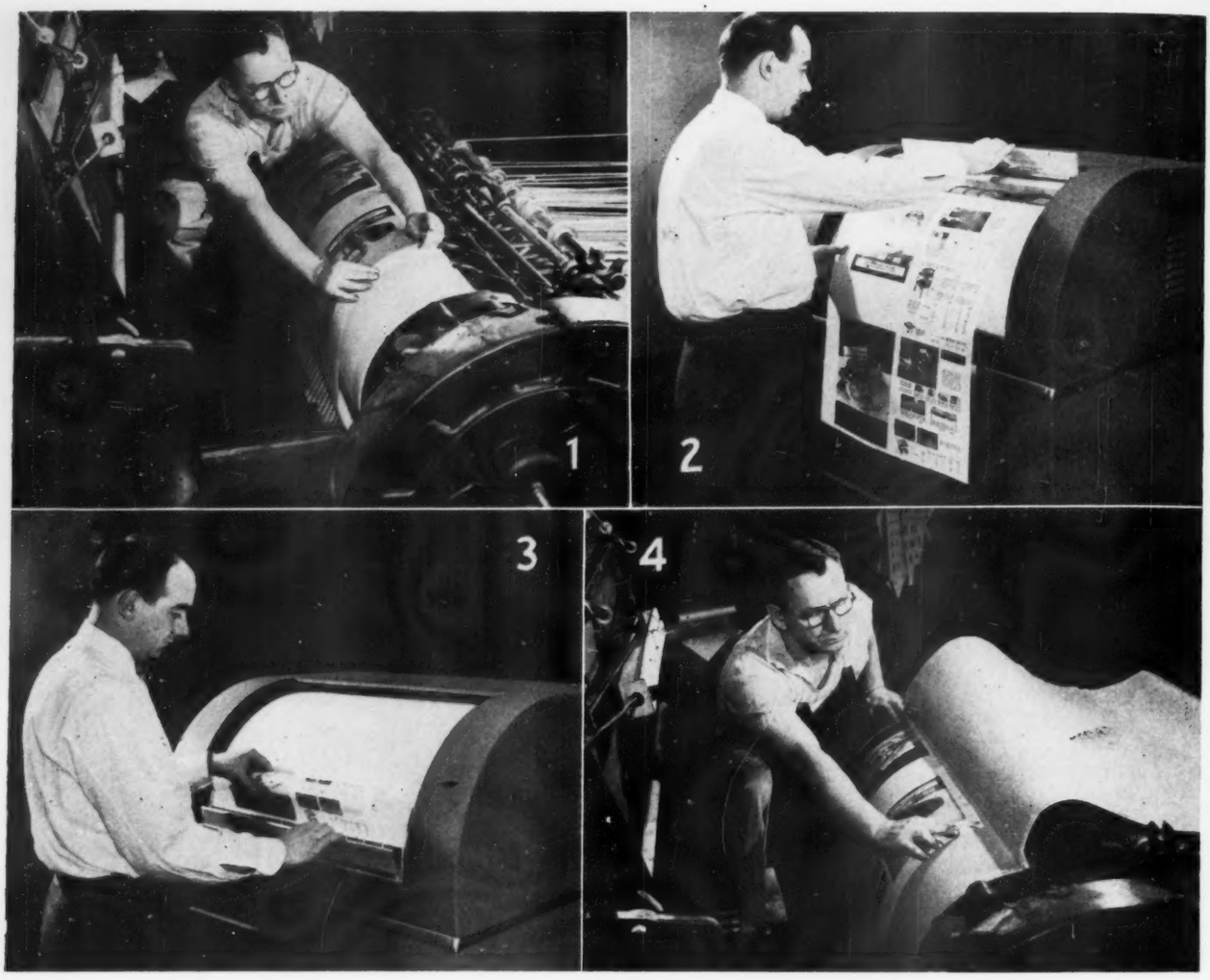


3M Announces Printing Press Makeready System

A method and equipment for cylinder press makeready has been announced by Minnesota Mining & Mfg. Co. The equipment, however, will not be ready for distribution until the latter part of this year or the first part of 1956. Even though delivery date is some months away, information is being released now by 3M to permit plant executives to obtain an idea about the working of the makeready method.

The main elements in the method consist of a heat-sensitive plastic coated sheet which is hung in the cylinder and becomes part of the press packing after having been treated in a special machine.

It is stated that press runs up to 200,000 imp. have been obtained from a single 3M makeready sheet. The company, however, is developing a new sheet from which it is expected longer runs can be obtained.

First step in the process is to take a proof of the form on the press after the form has been leveled. The next is to stab through the sheet into the tympan (Fig. 1) to provide register marks to permit relocating the makeready sheet under the top sheet of the press cylinder proof after the proof has been treated in the special machine (Fig. 2) to raise the printing solids and middletones to furnish greater required printing pressure.

While the proofed sheet is mounted on a slowly rotating drum in the special machine the following action takes place:

In areas where the ink is heavy, such as solids where there is need for greater pressure, and under the influence of infrared heat in the machine, the plastic coating rises to as much as 0.004 in. In highlight and middletone areas, the rise ranges from zero to 0.003 in. The unprinted (white) areas of the sheet are not affected while passing under the infrared heat source. Time required for treating the proofed plastic coated sheet is approx. 1½ min.

The treated makeready sheet with raised printing areas is removed from the machine and is returned to the press. The pressman places it usually 0.012 in. deep from the surface of the top sheet (Fig. 4).

In Fig. 2, the leading edge of the proofed sheet is being attached to clamps on the drum which rotates slowly within the cabinet. The tail end of the sheet is also fastened to the drum by another set of clamps. The bar being grasped by the operator in Fig. 2 is employed to release both the head and tail clamps.

As the drum revolves, the leading edge of the now treated makeready sheet is unclamped and the operator rolls it gradually as permitted; or if the sheet is small, he holds it in flat form until the tail end clamp appears in the cabinet opening. At this time, the clamped tail end of the sheet is released by raising the bar as in Fig. 3.

The makeready sheet treating cabinet is 38 in. wide, by 31 in. deep (front to back), by 55 in. high. Capacity of the present model cabinet will accept makeready sheets up to 25 in. by 72 in. The plastic coated makeready paper base is supplied in roll form—min. width 24 in. or max. width up to 48 in. If further information is wanted, please mention PEE No. 519 in your request.

Strives for Automatic Operation of Composing Room Thru Studies

Work motion reduced
Replacing equipment
Work simplification
Ad copy deadlines
The ad proof problem
Machinists' chart system

By A. E. ROSENE*

**Production Mgr., St. Paul (Minn.)* Pioneer Press *and* Dispatch. Address delivered before *Great Lakes Mechanical Conference, Hotel Sheraton-Cadillac, Detroit, January 1955.*

I AM part of an organization that owns and publishes a large number of newspapers—some of them big and some not so big. Our first goal is to make the work easy, believing in the philosphy that it is fun to produce when the job is easy. With rare exceptions, most employees would much rather do a good day's work. Our job is to furnish them the tools and the system to accomplish that objective. When we buy machinery, we first make a cold dollar and cents analysis as to what the purchase of the machinery will produce in savings or increased efficiency. We believe in plenty of saws, mitering machines, proof presses, galleys, a slug stripper, and, last but not least, plenty of material such as spacing and borders, at the same time making all these tools and materials handy to the workmen.

Try for Automatic Operation

We are constantly working toward what could be termed an automatic operation. We try to select and lay out our machines by the time tested template method with the thought of making the floorman's job as simple as merely placing a border around an ad and spacing out his copy.

When we plan the purchase of a linecasting machine, a substantial survey is first made as to the type and number of lines of copy the new machine will be expected to produce. We solicit ideas from the ad foreman, ad floormen, and those operators who will operate the machine. All the various suggestions are checked out in a meeting composed of key personnel and finally the manufacturer's representative is called in.

We strongly believe in mixers in the ad alley, also advertising figures in side magazines. We keyboard our most heavily used type faces, sometimes going as high as 36 pt. but most generally placing type sizes beyond 30 pt. on the Ludlows.

After we have tried a machine we sometimes still are not satisfied that we have come up with the right combinations. So we constantly keep a record of lines set per shift on a given machine and occasionally we juggle various type faces around so that no one machine develops into a bottleneck.

The primary purpose of carrying advertising figures in side magazines is to achieve an automatic operation so as to eliminate the necessity of the floormen going to the saw to cut in the figures.

A Ludlow operation can be, and in our plants is, an important supplement. We keyboard our heavily used faces and then beginning with 36 pt. we turn to the Ludlow, going as high, in some instances, as 96 pt. We believe in and use the various pieces of automatic Ludlow equipment such as self-centering and self-quadding sticks, plenty of spaces and in some instances heavily used advertising figure logotypes. We like the Ludlow system for the simple reason that we always have at our command fresh type faces.

The slug stripping device works wonderfully well on Ludlow lines where we wish to insert prices into a mortise either within a shell stereotype cast or a zinc mortise.

In the preparation of ad copy we employ a substantial number of markup men and in the markup of ads we have devised the simplest terms and symbols, obviously to eliminate as much long hand work as possible for the markup men. Through experience we have found that markup men can be expensive through the selection of type faces and sizes for a given ad. Some markup men will attempt the perfect typographical specimen through the selection of various type faces and sizes. I recall one instance where a 1 col. by 1 in. ad required type from six different machines. Needless to say, we straightened that fellow out in a hurry. It is suggested that when you get home, just out of curiosity, look over some 1 col. by 1 in., or 1 col. by 2 in. ads to see how many type faces or sizes have been worked in.

Handling Advertiser and His Copy

We should now talk about the advertising copy itself. How does the copy from the advertiser come in? Have you worked out deadlines with your advertising department, and if so, are they being observed? Also, we should bear in mind that so long as we deal in as highly a perishable product as advertising for the daily newspaper, there will be some violations. You will have to make exceptions for non-arrival of anticipated merchandise, also for unexpected arrival of merchandise. We cannot lose sight of the fact that the advertiser pays the freight and he is still the customer.

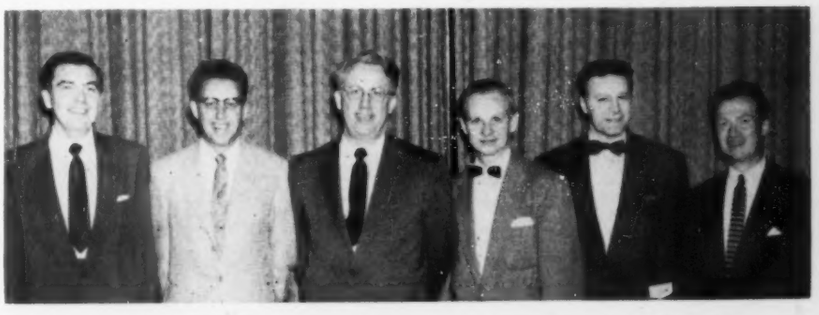
You must be alert for the persistent late copy account. Such a condition sometimes can be corrected by a personal call on the advertiser offering your help. However, it is wise to have the ad solicitor who calls on that particular account accompany you when making such calls. We believe in the policy of making periodic calls on our advertisers to see if we are doing a satisfactory job for them. By making regular calls we often correct a misunderstanding before it starts. Again, we never lose sight of the fact that our composing room is the service department to our advertising.

Strive for Typewritten Ad Copy

You should strive for typewritten copy whenever possible. Some years ago, a study was made of one week's display composition that was set from typewritten copy on which corrections took a little better than 7% of the total time spent on the ads. In ads set from pencil-written copy, corrections took in excess of 16% of the total time spent on the ads.

In the same study it was found that original machine composition from typewritten copy was set 14% to 38% faster than from pencil-written copy. The difference in the percentage being due to

(Continued on Page 82



Chicago Club Elects Craftsmen Officers—At the June 14 meeting of the Chicago Club of Printing House Craftsmen the following officers were elected (pictured from left to right): Second Vice Pres. Edward M. Egan, assistant sales manager, Twentieth Century Press, Inc.; First Vice Pres. Lowell L. Dummer, co-owner, Bruce Offset Co., Pres. Harold E. Sanger, printing instructor, Marshall High School; Treas. John A. Radziewicz, production manager, Service Printers, Inc.; Financial Secy. Frank E. Swanberg, director of typography, Spiegel, Incorporated; Recording Secy. Gordon W. Wilson, technical engineer, Western Newspaper Union.

Graphic Arts Equipment and Supplies

Literature for the Asking

Keep Yourself Informed. The folders and bulletins listed below all pertain to modern equipment, supplies, processes and/or methods. These have been prepared especially for plant managers, superintendents and foremen. Please ask for the pieces selected by number and send your request to Literature Dept., *Printing Equipment Engineer*, 1276 West Third St., Cleveland 13, Ohio.

Composing Room

FOTOSETTER TYPE FACE FOLDERS

A series of colorful folders recently issued by Intertype Corporation display seven type faces available for use with the Fotosetter photographic typesetting machine. The 5 in. by 7¼ in., four-page folders contain specimens of Baskerville, Bodoni, Cairo, Catalina, Century, Futura and Garamond. Please mention PEE No. 326L when requesting a copy.

METAL MELTING SYSTEM

Monomelt Co., Inc. is offering a four page bulletin on its system of direct melting and feeding of type metal from killout to freshly cast slug. The Monomelt is a single compact unit which can be installed on all casting machines. Specifications and illustrations are included in the two color bulletin. For a copy, please mention PEE No. 327L in your request.

AUTOMATIC TYPING MACHINE

Justowriter, an automatic tape operated typewriter-like machine, is described in an eight-page, 8½ in. by 11 in. bulletin produced for Commercial Controls Corp. The Justowriter consists of two units, a recorder and a reproducer. Punched paper tape complete with justification from the recorder unit operates the reproducer unit at 100 words per minute. Electrical requirements are: a.c., 115 v., 60 cy. For a copy, please mention PEE No. 328L in your request.

Platemaking

VANDERCOOK LITE-BASE

The Vandercook & Sons, Inc. Lite-Base system for properly mounting printing plates to precision height before they are placed in the letterpress form is illustrated and described in detail in an eight page bulletin together with two inset pages giving instructions for casting the base and for mounting metal plates. Related equipment for accomplishing precision heights to reduce press makeready is described. For a copy please mention PEE No. 329L in your request.

ART MATERIALS

Bourges Color Corp. has published a colorful, 8⅝ in. by 5⅝ in. booklet in which are described various types of overlay sheets for use in making color layouts. These include Bourges Colotone, Solotone, and Transopaque Sheets. For a copy, please mention PEE No. 330L in your request.

STRIPPING TABLE

A two-page bulletin from Colwell Litho Products, Inc. is used to describe that firm's Colight Stripping Table. Overall dimensions of the table are 37 in. high by 30½ in. wide by 28 in. deep. Other two-page bulletins are available on each of the firm's products which include the Colight Utility Sink, Colight filing cabinet for offset plates, the Colight illuminated magnifier, the Colight contact printing lamp and the Colight exposure frame. For a copy, please mention PEE No. 331L in your request.

LINE-UP TABLES

Craftsman Line-Up Table Corp.'s line of line-up and register tables is described in a well-illustrated, three-color, 20-page booklet. Sizes on the standard models begin at 28 in. by 39 in. and increase in four steps to 62 in. by 84 in. For a copy, please mention PEE No. 332L in your request.

COLOR REPRODUCTION EQUIPMENT

The Curtis Laboratories, Inc. line of color reproduction equipment is described in a series of one- and two-page, 8½ in. by 11 in. bulletins. Curtis equipment includes direct color cameras (three models), color printers (three models) and color analyst machines (two sizes). When requesting one of these bulletins, please mention PEE No. 333L.

COLOR MASKING REPRODUCER

A one-page, 8½ in. by 11 in. bulletin is used to describe the Gelb Color Masking Reproducer, manufactured by the Jos. Gelb Co. The unit utilizes a three point chase in sizes from 8 in. by 10 in. up through five steps to 20 in. by 24 in. For a copy, please mention PEE No. 334L in your request.

HAND LETTERING INDEX

Filmotype Corporation has released a six page, two color hand lettering index illustrating the selection of lettering for the Filmotype photolettering machine. In the Index are contained 275 styles of modern, popular hand-lettering styles, 100 of them recently released. Some of the styles are formals and cursives, modern scripts, serifs and free styles, futuras and gothics, etc. For a copy, please mention PEE No. 335L in your request.

MASTER WHIRLER

A one-page, two-color, 8½ in. by 11 in. bulletin has been published on the Master Whirler, by the Master Etching Machine Co. Speeds, performance time, electrical capacity and sizes of the three types of machines available are described. There is also a picture of the machine. For a copy, please mention PEE No. 336L in your request.

VACUUM PRINTING FRAMES

Illustrations and descriptions of four models of vacuum printing frames are included in a four page, two color folder prepared by Consolidated Photo Engravers and Lithographers Equipment Co. The Consolidated automatic hydraulic elevator vacuum printing frame is available in two standard sizes as follows: 50 in. by 70 in. and 60 in. by 90 in. The hinged-type vacuum printing frame is available in 28 in. by 38 in. and 40 in. by 52 in. sizes. Please mention PEE No. 138L when requesting a copy.

Pressroom

PRESS WITH CARBON TRIMMER

A description of the Model C-3-C Speed-Flex Press with carbon trimmer is contained in a two page bulletin issued by Orville Dutro & Son, Inc. Operations performed on the press and general specifications are listed. The letterhead size bulletin is printed in two colors. Please mention PEE No. 337L when requesting a copy.

MULTI-COLOR ROTARY LETTERPRESSES

In an attractive 10½ in. by 14 in. presentation consisting of 16 pages, C. B. Cottrell & Sons Co. discusses the rotary letterpresses which print from one to five colors in one operation. Specifications for five and also two color presses are given. Specimens of color process work are included. Also illustrated and described are detailed features and their value. Please mention PEE No. 338L when requesting a copy.

PLATEN PRESSWORK HANDBOOK

A 38 page, 5 in. by 7 in. booklet of instructions entitled *Handbook of Automatic Platen Presswork* sponsored by Chandler & Price Co., is available upon request. Text is prepared to cover care, adjustment and operation of C&P Automatic Platen Presses. Please mention PEE No. 339L when asking for a copy.

FLEXO INK BOOKLET

A 16 page booklet on flexographic printing inks has been produced by Bensing Bros. & Deeney, makers of BBD flexographic inks. The booklet, printed in brilliant process colors, describes in words and pictures the company's background and its research, quality control, manufacturing and service facilities. A directory of the company's 14 different standard flexographic inks, an ink selector showing which ink should be used to print all commonly used materials for packaging and related use, and tips on proper handling of inks, is also included. For a copy, please mention PEE No. 340L in your request.

MIEHLE OFFSET PRESSES

Two new offset presses are announced in a four page, three color bulletin released by Miehle Printing Press & Mfg. Co. The two presses, manufactured for Miehle by Faber & Schleicher, Offenbach-am-Main, Germany, are No. 38 single color and two color models. Maximum sheet size is 25 in. by 38 in. Diagrams and illustrations are included in the bulletin. For a copy, please mention PEE No. 341L in your request.

(Continued on Page 76)

Literature Request Coupon

After you have selected the literature described in these pages which you would like to have sent to you, please jot down the identification numbers on this coupon and mail to

PRINTING EQUIPMENT *Engineer*
1276 West Third St., Cleveland 13, Ohio

Literature Number(s) _____

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Your Name and Title _____

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A STANDOUT FOR SPEED, the Linotype Comet can cast slugs faster than any person or mechanical device can operate its keyboard.

Unmatched for simplicity of design, all parts of the Comet are readily accessible, a real help in reducing maintenance time. The keyboard and front swing open and the keyrod frame lifts out as a unit. These exclusive features open the machine from front to back—make inspection and servicing simple and easy.

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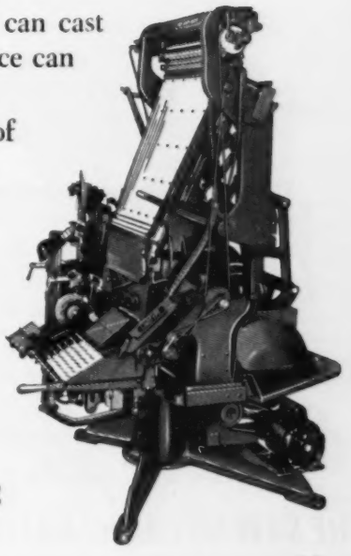

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Patents

For The GRAPHIC ARTS

Covering patents issued May 3, 10, 17, 24 and 31.

All new patents for the Graphic Arts are reported exclusively for *Printing Equipment Engineer* by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. *Printing Equipment Engineer* is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Composing Room:

KEYBOARD MECHANISM FOR TYPOGRAPHICAL COMPOSING MACHINE

In a Linotype, this mechanism presents a greatly simplified auxiliary keyboard. This is done by a new arrangement of finger keys directly connected to an improved system of motion transmitting members. Patent 2,708,505 by John H. Hilpman.

AUTOMATIC QUADDING AND CENTERING MECHANISM FOR TYPOGRAPHICAL MACHINES

The present invention provides means controlled by a composed matrix line as the line is advanced toward the vise jaws for automatically rendering the quadding and centering mechanism operable for quadding or centering the matrix line. Patent 2,708,506 by Hermann R. Freund and Frank B. Foster.

MAGAZINE RAISING AND LOWERING MECHANISM FOR TYPOGRAPHICAL MACHINES

These improvements for multiple magazine Linotype machines include a stabilized magazine rack. Due to its relocation with respect to the magazine shift frame, it makes possible further improvements to reduce misalignment. Patent 2,708,507 by John H. Hilpman.

TYPOGRAPHICAL CASTING MACHINE

The quadding and centering device of the invention may be applied as an attachment to old or existing machines, or may be designed to be built in new machines. Patent 2,707,549 by Louis Rosetto, assigned to Mergenthaler Linotype Co.

•

Platemaking:

PROCESS OF IMPROVING PLANOGRAPHIC PRINTING PLATES

The printing qualities of planographic plates coated with a finely divided mineral pigment and a hydrophilic adhesive can be improved by first brushing the surface with a natural bristle brush; then with a brush formed of nylon bristles. Patent 2,707,359 by Stephen V. Worthen and Charles H. Van Dusen, Jr., assigned to S. D. Warren Co.

METHOD AND APPARATUS FOR DRYING AND FORMING STEREOTYPE MATRICES

In accordance with the invention, a single piece of machinery is employed, instead of the usual two pieces of apparatus, to prepare a dried matrix, accurately shrunk to predetermined dimensions without distortion, for casting stereotype plates. Patent 2,708,318 by Leonard A. Frazee and Delmar H. Elder.

PHOTOGRAPHIC PROCESSES USING PRESCREENED MATERIAL

This process uses prescreened photo-sensitive material made by Clayden desensitization for the making of halftone images and line images without the halftone effect and extends the effective scale of prescreened material to accommodate long scale subject. It is based on discoveries concerning exposure effects, agitation control in developing, and their effect on the contrast range. Patent 2,708,626 by John A. C. Yule and Richard E. Maurer, assigned to Eastman Kodak Co.

THERMOGRAPHIC METHOD OF PRODUCING RELIEF AND INTAGLIO IMPRESSIONS

The method of the invention is valuable in production of a plate which may be directly used for typographic or intaglio printing, or indirectly used to produce a printing plate by using it as a mold into which type metal may be poured or sprayed to form a metal plate, or by pressing moistened paper to form a stereomat which is curved into shape and sprayed or cast with type metal to form the finished curved metal printing plate. Patent 2,709,654 by Adalbert B. Guth.

Printing Presses:

INK FEED SYSTEM FOR PRINTING MACHINES

The inking system, for use in lithographic, letter press and other printing systems, provides for the desired distribution of the ink composition over the inking rollers either without or with a lesser number of oscillating and inking rollers in the ink feed system. Patent 2,707,434 by Charles H. Morhardt, assigned to A. B. Dick Co.

SERVICE ELEVATOR FOR PRINTING PRESSES

To facilitate service operations, the elevator structure comprises a working platform movable between the upper and lower ends of a roll stack of a printing press. The platform is supported in cantilever arrangement upon an upright support disposed adjacent one side of the press. Patent 2,707,530 by Edward S. Bromberg, assigned to Pollock Paper Corp.

CARD HOLDING PLATEN

Invention is adapted for use in preparation of low cost publications such as directories, etc., by means of Photolith reproduction, and provides a platen having registering and holding means whereby cards may be accurately positioned relative to the machine printing line. Patent 2,707,545 by Elmer H. Dreher and Frederick W. Schremp, assigned to Remington Rand Inc.

DRIVE FOR MULTICOLOR PRESS

The object of this invention is the application of driving force at two or more different points in a sheet fed multiunit color printing press while preventing floating backlash. Patent 2,707,914 by Charles W. Harrold, assigned to Harris-Seybold Co.

RHEOLOGICAL CONTROL APPARATUS

In a multiroller distributing system, this invention provides means for detecting changes in viscosity of plastic inks and automatically adds solvent when viscosity exceeds predetermined amounts. Patent 2,707,916 by Daniel Smith and Daniel Hurley, assigned to Interchemical Corporation.

PRINTING PRESS FEED AND REGISTERING MECHANISM

The mechanism is useful in connection with rotary multicolor offset lithographic presses, and provides means whereby the press may correctly handle a sheet having a faulty leading edge, such as a straight line not normal to the sides of the sheet, or a curved line due to a bow of the blade of a shear. Patent 2,708,405 by Harold Walter Gegenheimer, assigned, by mesne assignments, to Miller Printing Machinery Co.

PRINTING PLATES AND PLATE CLAMPING MECHANISM THEREFOR

For use in newspaper or other relief printing, the printing cylinder has a clamping mechanism duplicated for clamping the leading edge of one plate and the trailing edge of the other. The two sets of clamping hooks face oppositely around the cylinder and are alternated and interfitted axially of the cylinder. Patent 2,708,407 by Alexander J. Albrecht, assigned to R. Hoe & Co., Inc.

DAMPENING MECHANISM FOR LITHOGRAPHIC OFFSET PRESSES AND THE LIKE

The mechanism provides segregated water treatment for different parts of a plate cylinder according to requirements, such as required for different sizes and designs, borders or lateral areas, solid ink impressions, half-tone impressions, etc., and includes a liquid-supply wheel which takes up liquid on its surface until enough is taken up to counterbalance an opposite weight. Patent 2,708,874 by Joseph Schultz.

PRINTING PLATE CYLINDER

The cylinder is of the type in which the plates are held together by clips engaging underneath the plates for holding them on the cylinder, and is constructed so that a printer may readily rearrange components to adapt the cylinder to print on paper of different widths. Patent 2,708,875 by Charles A. Harless, assigned to R. Hoe & Co., Inc.

PLATE LOCKUP FOR PRINTING PRESS

Applicable to both newspaper color presses and magazine presses, this plate lockup may be operated either in forward or reverse direction of rotation and performs the gripping and adjusting functions on either the leading edge or trailing edge of the printing plate. Patent 2,709,405 by Henry L. McWhorter, assigned to The Goss Printing Press Co.

TENSION LOCKUP FOR PRINTING PRESS

Invention provides a novel tension lockup in which the gripping fingers are translated rather than rotated into engagement with the pockets provided on the plate and in which translation and retraction occur sequentially to submerge the fingers below the surface of the printing cylinder. Patent 2,709,406 by Dennis H. Knowles, assigned to The Goss Printing Press Co.

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Feeding, Folding, Delivery:

JOGGING MACHINE

The table used in this jogging machine may be lowered and tilted and elevated and levelled for easy removal and application of loads of paper. This also adapts the table for use as a feeding table, obviating the removal of straightened stacks of paper. Patent 2,707,632 by Dietrich Daneke, assigned to Fred M. Brackett.

PATENT SEARCHES

For Patent Research in the U.S. Patent Office, or a prompt estimate on any type of search, write

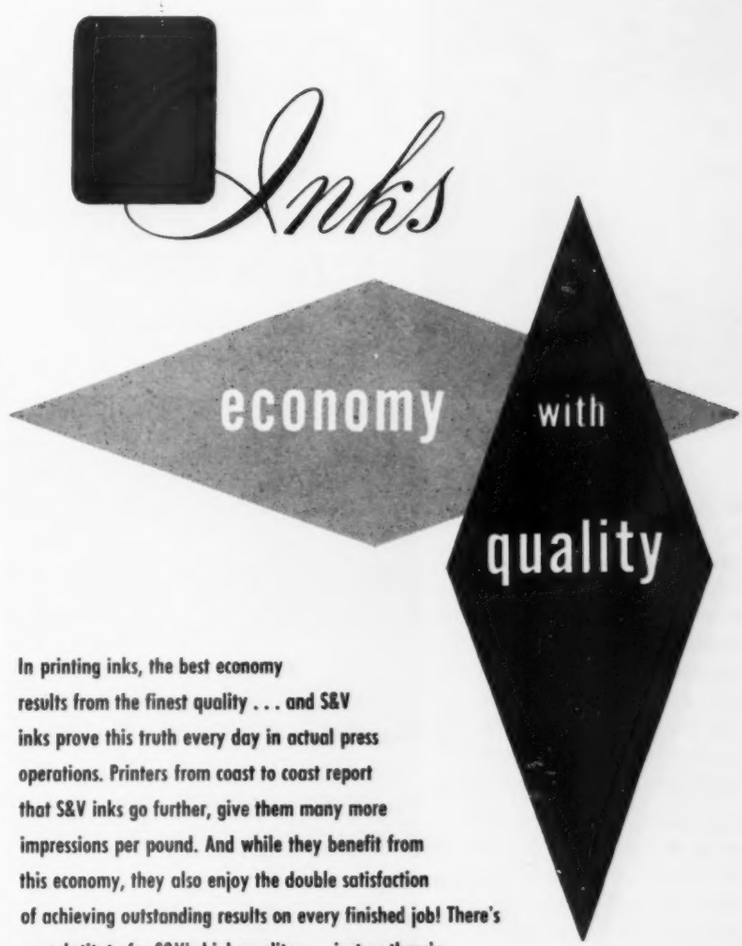
INVENTION, INC.
Munsey Bldg. Washington, D.C.

SIGNATURE GATHERING AND STAPLING MACHINE

One operator only is required to operate this machine for collating pre-folded sheets of printed or mimeographed forms and then stapling the sets for the production of sales pamphlets, instruction booklets, etc. Patent 2,709,584 by Jack Kleinberg.

WEB-FEEDING MECHANISM FOR PLATEN PRINTING PRESS

The paper feeding apparatus may be set to cause successive feed actions to uniformly advance paper any desired dis-



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tance within limit of a given range of adjustment, and insures exact registration between a reciprocably moving platen and sections of the paper web which are to take a printing impression therefrom. Patent 2,708,575 by Edwin C. Oliphant.

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Binding, Cutting, Perforating:

STACKING CONVEYOR FOR BOOKS AND THE LIKE

For receiving books from a binding machine, the conveyor has a rotating starting wheel which engages the trailing edges of books and gives them initial feeding movement in direction of conveyor travel. The books are thus uniformly fanned out on the conveyor so that they can be properly stacked with no possibility of bending or crumpling. Patent 2,708,863 by Richard M. Payne.

CUTTING MACHINE

In a paper cutting machine having a cutting knife with a reciprocating cutting cycle of operation, a safety stop arrangement is used to prevent accidenta repetition of the cutting cycle. Patent 2,709,509 by Russell L. Haywood, assigned to Harris-Seybold Co.

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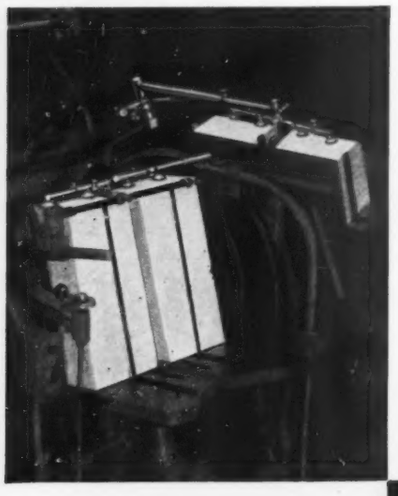
Miscellaneous:

SHEET INSPECTING DEVICE

Freshly printed sheets, dusted with an anti-offset powder, are supported on an easel-like frame which carries a light box at the top, the light being directed on the sheet so as to facilitate inspection for defects. Patent 2,707,415 by George F. Rooney, Jr.

PADDING PRESS

This is an improved padding press which is portable, sturdy, and has an improved clamping head. It is adapted for production of different sized pads, for quick loading, aligning, and clamping. Patent 2,708,400 by Raymond C. Tait.



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WITH SIDE DELIVERY

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TO REGISTER

Because *both* sheets in printing small forms on the C & P NEW CRAFTSMAN are always held by the feeding arm until positioned on the platen, *both* sheets can be printed to an accurate hair-line register. This doubles production so that from 8,000 to 9,000 impressions per hour on small forms are entirely feasible.

High quality, fast production on small forms is but one of the scores of features that make for profitable printing with the NEW CRAFTSMAN. Other outstanding advantages include.

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Conference Dates

(With Organization Name and Principal Officer)

American Photoengravers Assoc. — 1955 Conv., Waldorf-Astoria Hotel, New York, N. Y., Oct. 10-12. Exec. Secy. Frank J. Schreiber, 166 W. Van Buren St., Rm. 430-A, Chicago 4, Ill.

ANPA Mechanical Conf. — 1956 Conf., Statler-Hilton Hotel, Dallas, Tex., June 5-7. Mgr., ANPA Mechanical Dept., Richard E. Lewis, 370 Lexington Ave., New York 17, N. Y.

Book Manufacturers' Institute—1955 Conf., The Greenbrier, White Sulphur Springs, W. Va., Oct. 13-15. Secy. Miss A. G. Watson, 25 W. 43rd St., New York 36, N. Y.

Fifth District Craftsmen's Conf. — 1955 Conf., Netherland-Plaza Hotel, Cincinnati, Aug. 6. Secy.-Treas. Dave Walker, Adm. Asst., Graphic Arts Assoc. of Michigan, 320 W. Lafayette St., Detroit 26.

Graphic Arts Trade Assoc. Executives — 1955 Meeting, Chalfonte-Haddon Hall, Atlantic City, N. J., Oct. 13, 14. Secy.-Treas. Arthur L. Johnson, Graphic Arts Assoc. of Milwaukee, 704 W. Wisconsin Ave., Milwaukee 3, Wis.

Gravure Technical Assoc. — 1956 Annual Meeting, Hotel Biltmore, New York, N. Y., Feb. 1-3. Secy. Len S. Pinover, Room 4800, 30 Rockefeller Plaza, New York 20, N. Y.

Great Lakes Newspaper Mechanical Conf. —1956 Conf., Schroeder Hotel, Milwaukee, Wis., Jan. 29, 30, 31. Secy-Treas. Don Clark, Stereotype Supt., Grand Rapids (Mich.) *Press.*

Illinois Newspaper Mechanical Conf. — 1955 Conf., Leland Hotel, Aurora, Ill., Sept. 24, 25. Secy.-Treas. Arthur Kramer, Joliet (Ill.) *Herald-News.*

Intl. Assoc. Electrotypers & Stereotypers—1955 Conf., Shoreham Hotel, Washington, D. C., Oct. 19-22. Exec. Secy. A. P. Schloegel, 701 Leader Bldg., Cleveland 14.

Intl. Assoc. of Printing House Craftsmen —1955 Conv., Netherland-Plaza Hotel, Cincinnati, O., Aug. 7-10. Exec. Secy. Pearl E. Oldt, Rm. 806, Transportation Bldg., 307 E. Fourth St., Cincinnati 2, O.

Intl. Graphic Arts Education Assoc.—Exec. Secy. Samuel M. Burt, 719 Fifteenth St. N. W., Washington 5, D. C.

Intl. Printers Supply Salesmen's Guild — 1955 Conv., Netherland-Plaza Hotel, Cincinnati, O., Aug. 7-10. Secy. Myron F. Lewis, 608 S. Dearborn St., Chicago 5.

Intl. Typographic Composition Assoc. — 1955 Annual Conv., Hotel Claridge, Atlantic City, N. J., Sept. 7-10. Secy. Frank M. Sherman, 1015 Chestnut St., Philadelphia 7.

Iowa Daily Newspaper Mechanical Conf. Secy.-Treas. Paul F. Kamler, Mechanical Supt., Clinton (Ia.) *Herald.*

Kansas-Missouri Newspaper Mechanical Conf. — 1955 Conv., Town House Hotel, Kansas City, Kan., Sept. 10, 11. Kansas Secy.-Treas. Larry Miller, Kansas Press Assoc., 701 Jackson St., Topeka, Kan. Missouri Secy.-Treas. William A. Bray, Mis-

souri Press Assoc., 220 Walter Williams Hall, Columbia, Mo.

Lithographers National Assoc., Inc.—1956 Conv., Drake Hotel, Chicago, Ill., May 10-12. Exec. Dir. W. Floyd Maxwell, 420 Lexington Ave., New York 17, N. Y.

Mid-Atlantic Newspaper Mechanical Conf.—1956 Conf., Lord Baltimore Hotel, Baltimore, Md., March 8-10. Conf. Dir. Theodore A. Serrill, PNPA General Mgr., 300-312 Telegraph Bldg., Harrisburg, Pa.

National Assoc. of Litho Clubs—1956 Conv., Lord Baltimore Hotel, Baltimore, Md., April 20-21. Exec. Secy. Elton N. Baker, 833 N. Orleans St., Chicago 10, Ill.

National Assoc. of Photo-Lithographers—1955 Conf., Hotel Statler, Cleveland, O., Sept. 21-24. Walter S. Soderstrom, 317 W. 45th St., New York 36, N. Y.

National Printing Equipment Assoc., Inc.—1955 Conv. meets concurrently with Printing Industry of America, Hotel Chalfonte-Haddon Hall, Atlantic City, N. J. Secy. James E. Bennet, 140 Nassau St., New York 38, N. Y.

National Safety Council Printing and Publishing Section—1955 Meeting, Conrad Hilton Hotel, Chicago, Oct. 17-19. Staff Rep. James D. Saul, National Safety Council, 425 N. Michigan Ave., Chicago 11.

New England Mechanical Conf. — 1955 Conf., Hotel Statler, Boston, Mass., Oct. 15, 16. Secy.-Treas. Walter C. Crighton, Comp. Room Supt., New London (Conn.) *Day*.

New York State Capital District Mechanical Conf. — 1956 Conf., Sheraton-Ten Eyck Hotel, Albany, N. Y., Jan. 28, 29. Dir. Floyd Laurenty, Schenectady (N. Y.) *Union-Star*.

Northwest Mechanical Conf.—1956 Conf., tentatively set for Radisson Hotel, Minneapolis, Minn., Feb. 18-20. Secy.-Treas. Ralph N. Carson, Linecasting Instructor, Dunwoody Industrial Institute, 818 Wayzata Blvd., Minneapolis.

Pacific Mechanical Conf. — 1955 Conv., Sheraton-Palace Hotel, San Francisco, Calif., Sept. 9-11. Secy. Edward Maggi,

→ → → →

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4. Stagger Stitch Attachment.
5. Third Stitcher Head Attachment.
6. Small Booklet Hold-down.
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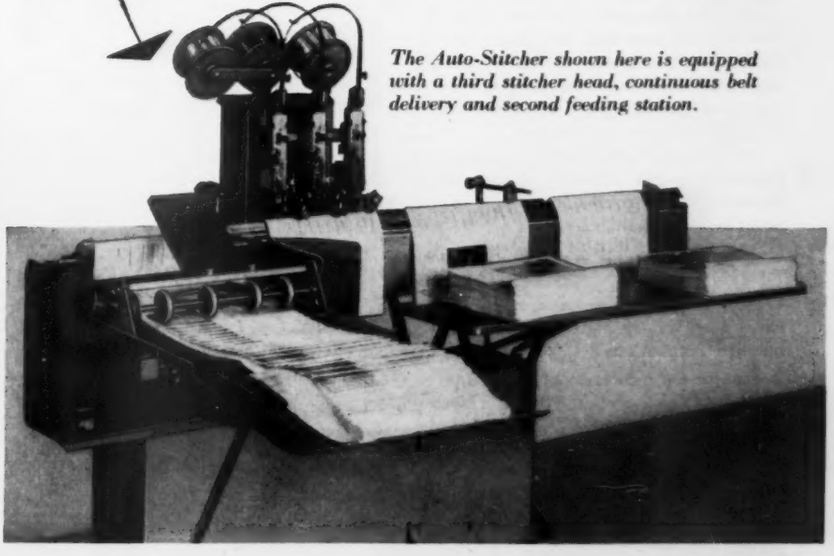
AUTO-STITCHER

The Auto-Stitcher shown here is equipped with a third stitcher head, continuous belt delivery and second feeding station.



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Benton Harbor, Mich.

World's Largest Manufacturers of Perforators, Wire Stitchers and Paper Punching Machines

Phillips and Van Orden, 870 Brannan St., San Francisco 3.

Packaging Institute Assoc. — 1955 Forum, Hotel Statler, New York, N. Y., Nov. 1, 2. Exec. Dir. Laurence V. Burton, 342 Madison Ave., New York 17, N. Y.

Printing Industry of America—1955 Conf., Hotel Chalfonte-Haddon Hall, Atlantic City, N. J., Oct. 15-20. Gen. Mgr. James R. Brackett, 719 Fifteenth St., N. W., Washington 5, D. C.

Research and Engineering Council of the Graphic Arts Industry, Inc.—1956 Meeting, Edgewater Beach Hotel, Chicago, Ill., May 9-11. Managing Dir. Robert E. Rossell, 719 Fifteenth St., N. W., Washington 5, D. C.

Screen Process Printing Assoc., Intl.—1955 Conv., Ambassador Hotel, Atlantic City, N. J., Sept. 10-14. Exec. Secy. Robert H. Blundred, 549 W. Randolph St., Chicago 6.

SNPA (Eastern Div.) Mechanical Conf. — 1955 Conf., Hotel Roanoke, Roanoke, Va., Aug. 22, 23. Secy. Ray B. Crow, Southern Newspaper Publishers Assoc., P. O. Box 1569, Chattanooga 1, Tenn.

SNPA (Western Div.) Mechanical Conf.— Secy., Walter Johnson, jr., P. O. Box 1569, Chattanooga 1, Tenn.

Southern Graphic Arts Assoc.—1956 Conv., Eola Hotel, Natchez, Miss. Secy. Charles E. Kennedy, 1514 South St., Nashville, Tenn.

Technical Assoc. of the Graphic Arts — 1956 Conf., Edgewater Beach Hotel, Chicago, May 7-9. Secy.-Treas. Philip E. Tobias, 140 N. 6th St., Philadelphia 6, Pa.

NOW!

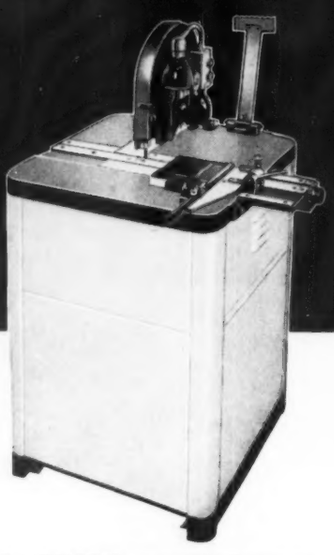
TWO ROUSE TIME-SAVING

PLATE SAWS

With Exclusive Automatic Feed

For Photoengravers,

Stereotypers, Printers



No more manual squaring up, guesswork alignment, tacking, scoring, beveling, trimming, removing burrs, using wedges. That's how a Rouse Plate Saw soon pays for itself.

Just make 4 quick, easy, automatic saw cuts and your plate is ready for the printer. The *exclusive* automatic feed guarantees each cut to be perfectly square, smooth-edged and uniform on any copper, zinc, magnesium or plastic plate, whether wood or plastic mounted or shellcast.

Cuts are made to Picas, Points, Quarter Points or Inches as required. Outside Mortising is effectively done to pica and point measurement.

NEW 24" MODEL—automatically cuts up to 24" of type-high work in only 27 seconds.

15" MODEL—identical to 24" Model except it automatically cuts up to 15" of type-high work in only 17 seconds.

BOTH MODELS occupy only 26" x 26" floor space.

NEW FEATURES (*on Both Models*)

1. Now you can make *cuts as small as 1 Pica square* for signatures, key letter or number changes, etc.

2. *Narrow Cut* measures about 2 points (.028"), permitting cutting between type lines.

3. Saw blades are changed in just 1 minute due to new lever-operated tension release. Blades stay sharp during 30-40 hours continuous operation. New blades are inexpensive.

4. New simplified gauge adjusting device makes it easier to maintain perfect squareness in cutting.

DESIGNED BY MEN WITH 25 YEARS KNOW-HOW IN BUILDING BAND SAWS FOR PRINTERS

Write for complete details TODAY!

H. B. ROUSE & COMPANY

2214 North Wayne Avenue, Chicago 14, Illinois

ROUSE PRODUCTS...The Standard of the World Since 1899

Literature for Asking

(Continued from Page 70)

BANTHIN PRESS SPECIFICATIONS

Specifications of the Banthin Engineering Co. automatic cylinder press are listed in a two-color, four-page, 8½ in. by 11 in. folder. Photographs from three different views of the press show many of its features. Specifications include 38 in. by 94 in. floor space requirement, largest sheet size of 13 in. by 20 in., and a speed range with variable drive from 1800 i.p.h. to 4200 i.p.h. For a copy, please mention PEE No. 342L in your request.

KLUGE PRESS

Specifications, features and a description of the Kluge 10 by 15 automatic press with 12½ in. capacity are outlined in a two-page, 8½ in. by 11 in. bulletin prepared for Brandtjen & Kluge, Inc. The overall dimensions of the press are 46 in. by 68 in. For a copy, please mention PEE No. 343L in your request.

NUMBERING MACHINES

In two 12 page, fold-out folders are listed the various numbering machines, both for use in printing presses and hand models, made by American Numbering Machine Co. The 3⅜ in. by 6¼ in. folders contain many pictures, including samples of some special made-to-order number machines. For a copy of either or both, please mention PEE No. 344L in your request.

COUNTER AND CONTROL

Counter and Control Corp. has published an eight page, 8½ in. by 11 in. bulletin on its multi-stage circuit controlling counter with automatic recycling, the Programonitor. This counter is built to count shaft revolutions at speeds up to 4000 rpm; select any count-cycle setting up to 2000 counts; select any even numbered count-cycle from 2000 to 4000 counts; select any number of intermediate switching points in the count-cycle; arrange intermediate switching points in any progressive sequence; and recycle the resultant switching pattern indefinitely on a fully automatic basis. For a copy, please mention PEE No. 345L in your request.

OFFSET PRINTING PRESS

A four page, 8½ in. by 11 in. bulletin has been published by the Dilts Machine Works Div., Black-Clawson Co., on the firm's Pacemaker line of offset printing presses. A two page sheet of the same size is available which contains descriptions of the Pacemaker automatic collapsible register reel and the Pacemaker two drum winder. Features of this line of printing presses are well illustrated in the bulletin. For a copy, please mention PEE No. 346L in your request.

HYDRAULIC PRESSES

Hydraulic presses for plastics, rubber and laminating work, manufactured by the Hydraulic Division, Logan Engineering Co., are described in a four-page, 8½ in. by 11 in. bulletin. Many specifications are included in the information for the presses rated from 10 T. to 300 T. For a copy, please mention PEE No. 347L in your request.

PAPER PROCESSING MACHINERY

The Hudson-Sharp Machine Co. line of machinery for processing paper products is described in a handsome, 18 page booklet. Types of equipment included are flexographic printing presses and sheeters; flexographic and rotogravure presses, tinters, and sheeters; embossing machines; wet or dry waxing machines for papers and boards; laminators; combiners and gumming machines; towel and napkin folders; tissue intefolders; paper and core winders and slitters; special folders; and wrapping machines. Well-illustrated. For a copy, please mention PEE No. 348L in your request.

COLOR REGISTER CONTROL

An attractive, 12 page, 8½ in. by 11 in. booklet is available in which the Hurletron Automatic Proportional Color Register Control is described. Published for the Electric Eye Equipment Co., manufacturers of the control, the booklet is printed in two-colors and is illustrated with many photographs. Functions and components of the color register control system are explained. For a copy, please mention PEE No. 349L in your request.

OFFSET PRESSES

A two color, four page brochure features the Miller Printing Machinery Co.'s M.A.N. Offset Presses. The presses are single, two and multicolor, with sheet sizes of 30 in. by 42 in., 36 in. by 48 in. and 40 in. by 56 in. In the brochure are listed features of the presses and specifications. For a copy, please mention PEE No. 350L in your request.

STOP-OFFSET SPRAY UNITS

A four page, two-color, 8½ in. by 11 in. bulletin has been published by Ortman-McCain Co. on its line of Stop-Offset Dry Spray units. The well illustrated bulletin is illustrated with photographs of various models plus several views of special features. For a copy, please mention PEE No. 351L in your request.

ROLL LEAF FEEDER

A one-page, two color, 8½ in. by 11 in. bulletin is used to describe the automatic 3-Draw Model Roll Leaf Feeder, manufactured by the Peerless Roll Leaf Co., Inc. Three sets of rollers permit the feeding of three rolls of leaf of different widths, says the manufacturer. For a copy, please mention PEE No. 352L in your request.

ENGINEERED WINDING

A 12 page booklet about what is described as engineered winding of webs and strands has been prepared by Hobbs Mfg. Co. In addition to showing each of the five models of Hobbs-Alquist winders and illustrating typical installations of these winders, illustrations and descriptions of companion winding machinery are included in the booklet. A questionnaire is also included to provide for engineered winding plans. The booklet is printed in two colors and measures 11 in. wide by 8½ in. Please mention PEE No. 367L when requesting a copy.

Bindery

STRIPPING MACHINES

Brackett Stripping Machine Co. has an 8½ in. by 11 in., two color, four page folder in which are described the company's new Edition model stripping machines. The company also makes Utility, Heavy-Duty and Pony models. The Edition model is built to handle books, sections or boards, square or round back, in any thickness up to 2 in. with a maximum tape turnover of 1½ in. on either side. The machine also is built to handle a maximum sheet width of 42 in. For a copy, please mention PEE No. 353L in your request.

THE MACEY COLLATOR

A four page, two color, 8½ in. by 11 in. bulletin in which the Macey Collator is described, has been published by the Special Products Div., Harris-Seybold Co. Various models handle sheets as small as 3 in. by 5 in. and as large as 12 in. by 17 in., says the manufacturer. The well illustrated bulletin also contains information on specifications and attachments to the Macey unit. For a copy, please mention PEE No. 354L in your request.

Miscellaneous

ACA ADJUSTABLE DRIVES

General Electric Co. Bulletin No. GEA-5568A consists of eight letterhead size pages. Bulletin is well illustrated. The ACA Adjustable Speed Drives for commercial printing equipment carry ratings of 3 h.p. to 50 h.p. with speed ranges of 3-1, 6-1 and 20-1. Equipment provides d.c. performance directly from a.c. power. Illustrations are descriptive of various press drives as well as drives for gatherer and binder, cutter and creaser and automatic gluer. Please mention PEE No. 355L in your request.

CAMBRIDGE BULLETIN

Two instruments of interest to persons working in the printing industry are described in a four-page, 8½ in. by 11 in. bulletin, published by Cambridge Instrument Co., Inc. The instruments are the Paper Hygroscope and the Printer's Moister Indicator. By using the Paper Hygroscope a printer can get the percentage of relative humidity which his printing paper is above or below the room relative humidity. Use of the Moister Indicator enables the printer to get the relative humidity of both room and paper and with this information to make simple deductions to get the relationship between the two. Please mention PEE No. 356L when requesting a copy.

PRODUCTS AND SERVICES

A loose leaf catalog of Ideal Roller & Mfg. Co.'s products and services was recently released. The 23 page catalog contains printing and lithographic aids including descriptive material, specifications, uses and method of ordering for each product. All types of Ideal rollers, processing machines, plate gums and adhesives are completely described. For a copy, please mention PEE No. 357L in your request.

STEAM HUMIDIFIERS

Bulletin No. 500 of the Armstrong Machine Works contains a rather complete story on the steam humidifier along with descriptions of various Armstrong units. The well-illustrated, 8½ in. by 11 in. booklet is begun with material on the subject of what is relative humidity. Other sections of the booklet are written on how relative humidity affects hygroscopic materials, other effects of relative humidity, the case for steam humidification and selection data. For a copy, please mention PEE No. 358L in your request.

FIRE PROTECTION EQUIPMENT

Bulletins on fire protection equipment, both central systems for printing and newspaper plant protection and portable units, have been made available by C-O-Two Fire Equipment Co. Two 8½ in. by 11 in. bulletins are devoted to carbon dioxide type fire extinguishing equipment and to dry chemical fire extinguishing equipment. A thorough, well illustrated booklet on central fire fighting systems for printing plants has been prepared for the same firm. For a copy, please mention PEE No. 359L in your request.

CABINETS AND RACKS

The Foster Mfg. Co.'s line of printing plant cabinets and racks is described in a 16 page, 8½ in. by 11 in. booklet. The well illustrated catalog contains sizes and prices. For a copy, please mention PEE No. 360L in your request.

AUTOMATIC LABELING MACHINES

Chesire Mailing Machines, Inc., has made available a colorful 8½ in. by 11 in. bulletin on each of its labeling machines—models C, E, N, S, P, and PT. The six-page, fold-out bulletin on models P and PT has a description of each of the other models included on the back page. For a copy, please mention PEE No. 361L in your request.

CONVEYORS AND ACCESSORIES

In a 40 page bulletin are described Metagar Conveyor Co.'s conveyors along with material on accessories, switches and curves. The booklet is fully illustrated and diagrams of the various equipment are included. Two main categories of conveyors are power and gravity under which the equipment is listed. The two color booklet also includes chapters on application of conveyors, service instructions and terms and conditions of sale. For a copy please mention PEE No. 362L in your request.

COVER DEMONSTRATION PORTFOLIO

The Wheelwright Highlight Cover portfolio was recently completed by The Mead Sales Co. Included are six demonstration inserts in white and four of the seven colors available in this grade. Production data, such as type printing process, speed of run, type faces used, is also included on the cover and on each printed insert. For a copy, please mention PEE No. 363L in your request.

(*Continued on Next Page*)

PRACTICALLY EVERY PRINTING PLANT IN THE WORLD USES ONE OR MORE OF THESE
Rouse PRODUCTS
For absolute accuracy and extra profits, order Rouse time-saving equipment. Write for complete illustrated catalog—today!
No. 40 Lead and Rule Cutter
Slug Clippers
No. 2 Band Saw
Hand Miterer
Register Quoins
Economy Vertical Miterer
Composing Stick
Make-Up Rule
Line Gauge
Sennett Positive Assembler
Newspaper Wall File
Lino Slug Cutter
Type Mortiser
Form Truck
Tympan Paper Holder-Vertical or Horizontal
Press Seat
H. B. ROUSE AND COMPANY
2211 NO. WAYNE AVE. • CHICAGO 14, ILLINOIS
50 YEARS OF SERVICE TO THE PRINTING INDUSTRY

(Continued from Preceding Page)

OXFORD PAPERS

Visual and photographic evidence of the qualities of Oxford papers is contained in a four-page, 9 in. by 12 in., four-color folder published by the Oxford Paper Co. It's printed on Oxford Mainefold Enamel. For a copy, please mention PEE No. 364L in your request.

SAFETY SERVICES

The National Safety Council 1955 Occupational Safety Service Guide contains a list of the various safety services available to industry from the council. This is 70 pages of good reading for those firms interested in improving their safety record or in installing a safety program. For a copy, please mention PEE No. 365L in your request.

EXTENDED FORK TRUCK

This four page illustrated letterhead size bulletin is descriptive of the Yale & Towne Mfg. Co.'s new Warehouser Electric Truck with Extend-A-Fork. Truck is designed for greater operating flexibility in aisles through forks extending beyond the outrigger wheels. For a copy, please mention PEE No. 366L in your request.

Human Relations Essential to Lowering Costs

THE essential part human relations play in any technical advance or cost cutting program was stressed by speakers in the first session of the ANPA mechanical conference on Monday, June 6. Some experts go so far as to believe that the greatest cost savings are possible in this area. Though not yet an exact science, human relations is becoming more well-defined all the time. At this meeting several concrete suggestions for improving printing plant human relations were made.

Stuart List, publisher, Chicago *American*, started off the session by welcoming ANPA mechanical conference members to Chicago. D. Tennant Bryan, publisher, Richmond (Va.) *News-Leader* and *Times-Dispatch*, called the supervisors attending the conference the vital link in the chain of information from owner to man in the shop. And information is an essential ingredient to good human relations with employees.

Key to Lower Costs

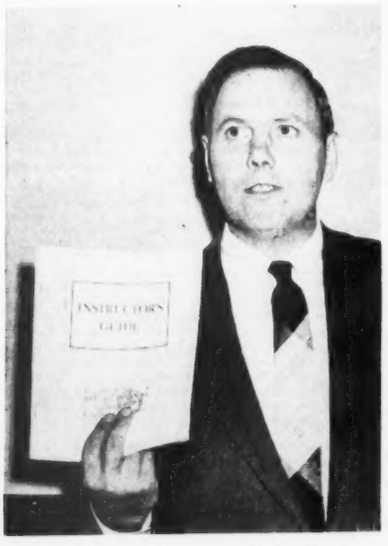
Warren G. Wheeler, jr., personnel director, South Bend (Ind.) *Tribune*, said: "Newspapers, probably more than any other business, have most to gain from mechanization. Our labor costs run from 50% to 60% of our total expenses—far higher than most businesses," he continued in his talk, "The Key to Lower Costs: Men or Machines?"

"It would seem that machines can be a big part of the key to lower costs (in the newspaper industry) . . . but I feel that the real answer lies with the people at these plants," he said.

"Probably all of us could do a better job of letting our people know what's going on in our plants. The best way is through personal contact. Surveys show that employees prefer to have the word straight from the boss's mouth though they get most of their information through the grapevine, a way they prefer least. In between these extremes are bulletin boards, house organs, letters and similar media. It is a strange thing that we who are in a business devoted to the printed word so seldom use it to tell our own story to our employees.

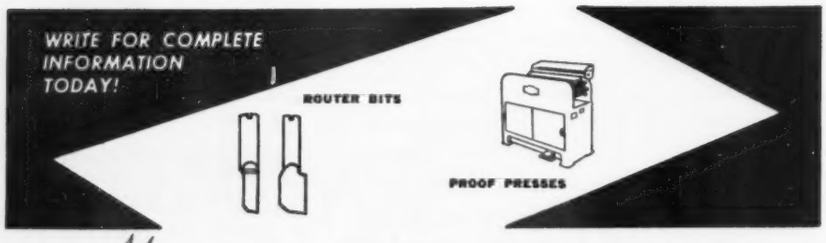
"Some words of caution in this area of communications," Wheeler continued. "We must listen as well as talk. We must be honest. Communicating with employees is seldom successful if tried only in time of crisis. Good communications should be a year 'round habit and it must be made of better stuff than sheer propaganda. . .

"Another way, which in the long run helps us get the right kind of people and atmosphere in our shops, is good, sound screening of apprentice applicants," he said. Still another point of screening is when



Walter R. Smith, chairman of the Training Committee, Printing & Publishing Section, National Safety Council, spoke on the subject of safety in the printing industry at the Chicago ANPA Mechanical Conference, Edgewater Beach Hotel, in June. Smith also is manager of employee activities and safety for R. R. Donnelley & Sons Co., Chicago.

The NEW and IMPROVED Wesel Router is built for heavy duty and long life. Special motor eliminates shifting of belts and arm glides smoothly without drag . . . two features that reduce operator fatigue. The Wesel Router is engineered to eliminate most of the maintenance problems encountered with this type of machine.



WESEL MANUFACTURING CO.

Dept. 101 **1141 N. WASHINGTON AVE., SCRANTON 9, PA.**

assigning a man to a new or improved machine. "Before we buy new equipment we usually investigate pretty thoroughly," Wheeler asserted. "By contrast, let us consider the men who are going to run the machine. How carefully do we look them over before we put them on the new job? What do we know about their capabilities? What do we do about a breaking in or training period?

"We . . . should consider his personal qualities. It may be helpful if we jot them down as we consider candidates for the new spot. What has his previous attitude been on the job? Does he pitch in when the going is tough? Does he tend to stick with something and see it through or is he a chronic griper who always has a stickful of excuses? Does he like a challenge?

Adjustments Needed

"With our man on the job," said Wheeler, "our next step should be the matter of adjustments—just as with the machine . . . If we simply tell him to get moving, his instinctive response is to get sore and be on the defensive. He'll figure that we don't think he is trying. On the other hand, if we let him know that we feel he wants to do well and that we want to help him, we will find ourselves closer to solving our difficulties. If this sounds a little too much like hearts and flowers, let me shift the scene for a moment to another situation—one that most of you have probably run into in one form or another. Your publisher or general manager storms into your office and says, 'Bill, you've got to cut your overtime.' Under these conditions we instinctively are more concerned with who does he think he is than with how we may be able to do something about overtime . . .

"So far," declared Wheeler, "we have stayed away from one of the basic problems involved in the trend toward mechanization. That is the fact that people naturally resist change . . . One reason people resist change and distrust new machines is their fear of the unknown. More than 100 years ago when steam power was introduced, mothers were warned not to have any more children because there would be no jobs for them. There was great concern when linecasting machines were introduced in composing rooms. Today, we know these changes and others have meant more jobs and better living conditions. Yet we face this same problem of worry today about new processes. Perhaps it is because it has been so many years since we have had any changes in newspaper plants. Perhaps it is because we aren't properly telling the story.

"Knowing our own particular situation in this connection," continued Wheeler, "we can try to tell our men how we feel changes in our plant will affect them. It is our policy for our publisher to talk to all of the men in a department before any new equipment is installed and to tell them why we are going to use the new machine and what we think it will mean so far as they are concerned. This also gives the men a chance to ask any questions they may have. We feel this has been helpful, though it is only a beginning . . .

"This matter of attitudes is a pretty complicated business because it involves a person's whole life," said Wheeler . . .

"Although research on a technical level is making great advances, all industry has much to learn about human relations. It is a difficult and hardly an exact science but many experts feel that it may be in this area that we will find our greatest untapped potential for increased productivity. Some feel that without a growth in our understanding of people much of our technical advancement may be wasted. In any case, as we face this period of increased mechenization in our mechanical departments, we may be sure that a better understanding of people is at least a part of the key to lower costs."

Safety in Printing Plants

One of the most dangerous aspects of safety in printing plants is that many printers do not realize that safety is a problem. So said Walter R. Smith, manager employee activities and safety, R. R. Donnelley & Sons, Chicago, in his talk, *Safety in Printing Plants*. True, the printing industry is safer than some industry groups, but it is also more dangerous than others.

Smith cited the improvement in the frequency rate of lost-time accidents at his company primarily through a safety training program. Before the program went into effect the rate was 26.1 lost-time accidents per million manhours worked. Last year that rate had been cut to 1.9 lost-time accidents per million manhours worked.

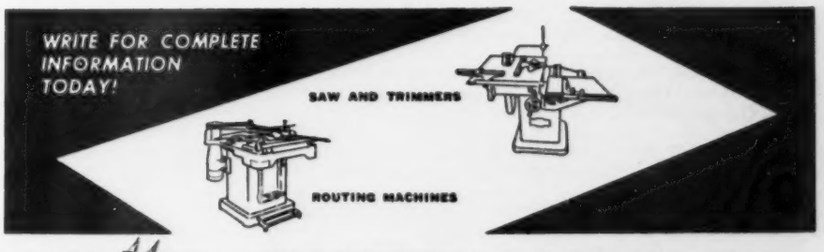
"There are two phases to the safety problem," Smith asserted. "Machines and people." Safety in the mechanical end of the printing industry can be improved by building safety into machines through protective devices, by practicing preventative maintenance in printing plants, and by good plant housekeeping. Improvement in the human side of the safety problem can be had through safety training especially for supervisors and foremen, by making personnel aware of danger spots and through constant safety reminders.

Smith said the National Safety Council has a helpful booklet on safety called *Safety in the Graphic Arts*. This should be available soon in a revised edition. The council also has worked up and will release probably within the next month a "home correspondence course" in safety for printing plants.

NEED PROOFS IN A HURRY?

...then you need the NEW WESEL EPP-4 PROOF PRESS

Wesel delivers quality proofs more quickly . . . more economically . . . with less maintenance. The EPP-4 features heavier construction and quieter operation. Equipped with mechanical safety guards and automatic stopping. Has improved platen inking.



WESEL MANUFACTURING CO.

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"OK, you guys . . . What's happened to our regular jogger?"

Lively Participation At ANPA Session For Smaller Newspapers

THE smaller cities session for the 1955 ANPA Mechanical Conference was held at the Edgewater Beach Hotel on Monday night, June 6. A large audience filled the room in which the meeting was held.

This meeting, scheduled to be of interest to mechanical and production executives of papers under 50,000 circulation, partook of an informal panel session—that is, questions were prepared in advance and printed in a booklet which was distributed to everyone in attendance. The booklet contained the topics for discussion and included typesetting machines, composing, stereotype, mailing room, photoengraving, pressroom, dispatch department and questions of a general nature related to printing plant operation and production. The meeting lasted far into the night.

The presiding officers and panel members on the platform were as follows:

Co-Chairmen were: Charles A. Fredrickson, Westchester County Newspapers, White Plains (N.Y.) and George F. Marshall, Portland (Me.) *Press Herald, Express and Telegram.*

Discussion Leader was: Roy Coates, Grand Rapids (Mich.) *Press.*

Panel Members: Charles Banker, Poughkeepsie (N.Y.) *New Yorker*, Press Stereo; I. J. Chalifoux, Cleveland *Plain Dealer*, Machinist; Leonard Clemens, Elkhart (Ind.) *Truth*, Press and Stereo; Eric Ivany, Battle Creek (Mich.) *Enquirer & News*, Composing Room; George W. Kent, New London (Conn.) *Day*, Press and Stereo; Walter Merkel, Holyoke (Mass.) *Transcript-Telegram*, Engraving Dept.; Glen Price, Beloit (Wis.) *News*, Photography and Engraving (Fairchild); Claude E. Schell, Reading (Pa.) *Eagle-Times*, Composing Room, and Herbert G. Taylor, Bethlehem (Pa.) *Globe Times*, Production Dept.

Discussion Leader Roy Coates, Pressroom Supt., Grand Rapids (Mich.) *Press*, selected questions at random from the list of questions in the booklet.

One of the questions asked from the floor was answered by I. J. Chalifoux, Head Machinist, Cleveland *Plain Dealer*. The question was related to the ejector blade picking up metal. Chalifoux advised that the one asking the question should check the mold disk locking studs and stud blocks together with the mold disk guide at the left side of the mold slide to see that there is a space of 0.003 in. between the constant side of the mold and the ejector blade. Clearance between the constant side of the mold and the ejector blade is imperative.

It seems that the problem of roller ghosting has never been settled to the satisfaction of a number of the executives attending the smaller cities meeting. The subject was brought up for discussion when discussion leader Coates asked, "What is being done to eliminate roller ghost?" Panel member George W. Kent said: "Nobody has ever been able to tell me what causes roller ghost. I've discussed the subject with people from all sections of the country. In our plant, we've been trying to eliminate for 10 years." One suggestion for the cause of roller ghost was made by Howard Gregg, Press Supt. of the Battle Creek (Mich.) *Enquirer & News*. Gregg thinks it may be due to rollers becoming hard if left in the storage rack for too long a time. An opposite view was expressed by another executive who stated the hardness of rollers prevents rather than causes roller ghosting.

Ludlow Efficiency

One of the questions which came up read as follows: "What are the advantages and disadvantages of having all Ludlow setting completed before the compositor gets the ad to put together as opposed to each man doing his own Ludlow work?" Composing Room Foreman James Morrisey, Albany (N.Y.) *Knickerbocker News*, said he had secured better results by having one man set all of the Ludlow composition in an ad on which he was working rather than leave it for someone on another shift to complete. It seems that the problem should be solved by each individual plant executive. Claude Schell, composing superintendent, Reading (Pa.) *Eagle-Times*, thinks: "It's up to the foreman to decide." Samuel G. Carmichael, composing superintendent, Pittsburgh (Pa.) *Press*, thinks it is best for one man to do the Ludlow composition, that is, a man who understands the job.

The next question was a rather lengthy one as follows: With a production problem of late advertising copy for the next day's publication, would it be better to stagger some of the ad alley compositors to a later starting time in the morning or establish a small night crew without increasing the number of situations? Claude Schell stated he found it better to start some men at 10 o'clock in the morning and have them work until 6 o'clock in the evening rather than to keep one or more men overtime.

In answer to the questions: "Has smaller newspapers successfully used fork lift trucks in paper handling? Who operates such a truck?" Mechanical Supt. C. A. Porter of the Dubuque (Ia.) *Telegraph Herald*, stated it is advantageous to use the fork lift trucks to move paper rolls from storage to press. The pressman runs the truck. This comment was followed by a statement made by L. M. Phelps, pressroom foreman of the Charlotte (N.C.) *News*, who said: "Lift trucks reduce white waste in our plant." Other comments were made about the clamp type of truck for handling newsprint roll.

Dispatch Supervision

One of the questions announced by Discussion Leader Coates was related to whether or not the dispatch department should be headed by a printer, someone from the advertising department, or some other person. It seems that the answers were various and it appears that so long as the department functions efficiently under competent supervision it doesn't make too much difference where the supervising person originated. Sid Scott said that the dispatch department for the Decatur (Ill.) *Herald and Review* is not supervised either by the advertising department or the composing room. "The decisions come from the general manager of the newspaper," he concluded.

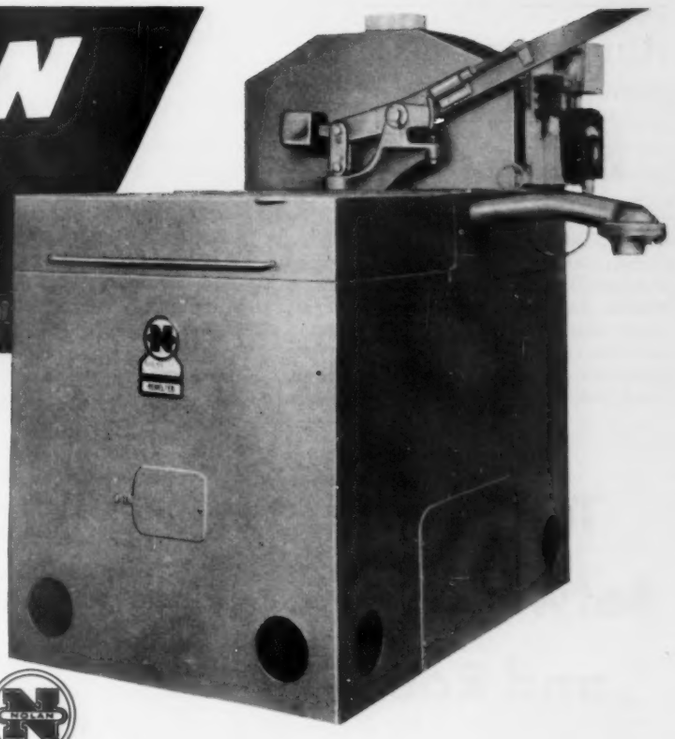
Panel Member Eric Ivany, composing superintendent, Battle Creek (Mich.) *Enquirer & News* stated: "We put a man in charge who previously had been in our advertising department."

In answer to the question: "Do color inks give the same coverage per lb. as black ink?" Discussion Leader Coates remarked: "We get good mileage on red but not on yellow." Production Mgr. Harold Mintun, Pittsburgh (Pa.) *Press*, stated: "It seems we get better mileage on color, but that is just my opinion."

The perennial problem of leader lines punching through and defacing the opposite side of the sheet was brought up. The use of rules instead of hyphen or dot leaders was mentioned. Production Mgr. George Marshall of the Portland (Me.) *Press Herald-Express Telegram*, figured that a good way to eliminate the defacement of the other side of the sheet was not to use any leaders at all.

FIRST INSTALLATION—Heidelberg Western Sales Co. recently announced the first installation of an Original Heidelberg Cylinder Press in the upper midwest area. The new machine was also announced by Publisher Henry Knipp in an edition of the Le Center (Minn.) *Leader*. The *Leader* will use its new machine principally for book printing and fine color work in its commercial printing department. Checking the adjustment of the Heidelberg Cylinder are (left to right) Martin Hardwick, Heidelberg Central, Inc., Kansas City; Leonard Blaschko, pressman; Henry Knipp, Publisher of the *Leader*, Harry Howard, Heidelberg Western Sales Co., Los Angeles.

GET UP TO 10 TON USABLE CAPACITY! WITH A NOLAN STEREO FURNACE



Using exterior heat exclusively, the Nolan Stereo Furnace reaches melting temperature in the fastest possible time. Regardless of the amount of metal in your pot you run no danger of oxidation or burning out of your heaters. What's more, there is no immersion unit to displace valuable metal space in the pot.

- Modern square or oblong design takes less floor space
- Accessories can be located in any position
- Stereo Furnace can be tailor-made to fit individual needs
- Adapts to gas, oil or electricity
- Available in sizes from 600 lbs. to 10-Ton *usable* capacities

Electrical or manual pumps are optional with each furnace or we will install your pump at the factory. Bottom pouring valves are also optional. For complete information on the Nolan Stereo Furnace write:

NOLAN Corporation ROME, NEW YORK

OVER 3,000 BAUMFOLDER USERS of the 17x22 "JUNIOR JET" say... "IT'S A GOLD MINE!"

- It will easily be the same for you as for the over 3,000 purchasers in recent years who say... "It pays for itself many times over every year."
- It's the world's closest-precisioned . . . finest . . . fastest folder. Makes folding your most profitable operation. 5 folds in 1 operation, 60 styles of folds . . . makes perforating practically ALL profit. It's an automatic Folder; automatic lightning-speed Perforator; automatic Scorer; automatic Cutter; automatic Crimper . . . All-in-One. Tomorrow's Automatic . . . at a pre-war price. Equipped with Friction Feed—$100 initial and $48.00 per month for 30 months . . . with Suction Pile Feed, extra motor and pump—only $100 initial — 30 months Pay-For-Itself terms.
- ***A "Gold Mine" for a Life-Time. Do allow us to mail specifications. Thanks.***

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WEST COAST OFFICE — 316 DeYoung Building, San Francisco, California — ED SPARKS

Automatic Operation

(Continued from Page 69)

the varying degrees of legibility of the pencil copy.

Corrected First Proofs

We think it is extremely important to furnish our advertisers with corrected first proofs. For a long time, we did not believe there would be any difference. Some years ago we made it an absolute rule that corrected proofs must go to the advertiser, even if it entailed overtime. As a result we found that corrected proofs to the advertiser result in very definite savings. Certainly you are all familiar with the philosophy: "Oh well, the printer is going to make some corrections anyhow, so you might just as well make a few." We believe that if the proof is corrected the tendency to make additional corrections will not be there. We allow our advertisers 15 min. to the column or 2 hrs. to the page for corrections and after that the advertiser is billed on an hourly rate for composition.

Extra Quad Matrices Helpful

Getting back to the machines again, it is so important that operators have a full supply of matrices. Speaking from experience as an operator, there isn't anything quite so exasperating as to wait for a given matrix to complete its cycle through the machine or to depress a key button without a matrix dropping because of the shortage of that particular character. One of the helps we have worked out, which has been quite successful, is the bridging through on our mixer machines of additional quads. By bridging through, I mean making it unnecessary to shift from one magazine to another for additional quads, particularly in the mixing necessary in grocery advertising.

Machinist's Maintenance Program

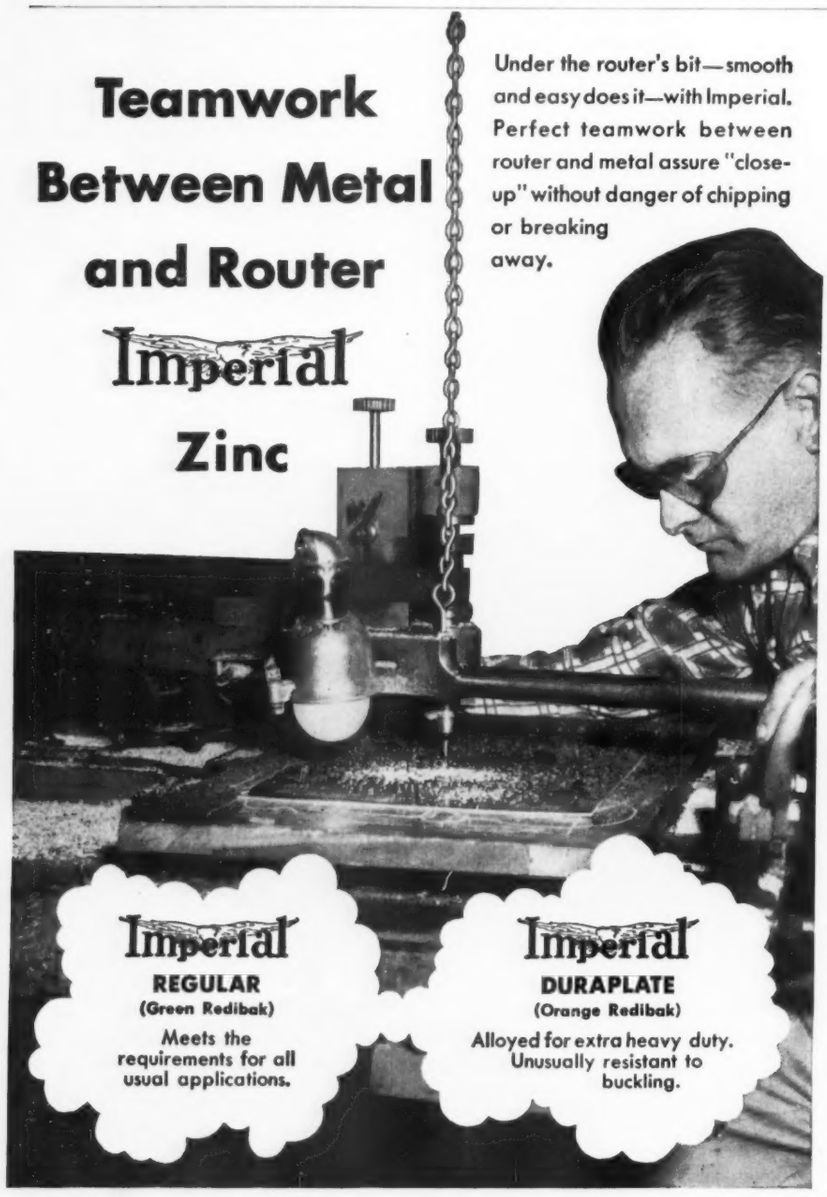
A definitely planned machinist maintenance program is a basic requirement to the well run composing room. Our machinists work by a chart system on which records are kept of the work done on various machines and when that work is necessary on the machines. A mistake made in many composing rooms is an attempt to save on machinists and preventive maintenance, when all one needs to do is to observe the operators waiting for the machinist to answer trouble calls to prove that point.

Pot Replacement an Investment

Along those lines we had a very interesting experience a couple of years ago when we purchased a couple of newspapers and merged them. In observing the operation, I noticed some operators were dumping their type. The dump man would look over the slugs, shake his head and throw the type into the hell box, putting the copy back on the hook. After watching this happen a couple of times, I inquired as to the reason. I was told they had about 10 pots in the battery that were giving trouble. It was not uncommon to set a given story two or three times. At the same time they were screaming to me how difficult it was to make the established composing room press deadlines. We immediately placed an order for 10 new pots at $250 each. After those pots were installed we were able to reduce the keyboards in that particular operation by four on each shift. In other words, for an investment of $2500 we reduced the crew by eight situations, each situation averaging $100. Fundamental mathematics will quickly prove the value of that investment in 10 new pots.

Apprentice Testing

We are proud of the apprentices which we turn out. We operate a dispatch or control room. Our proof runners as well as employees of the dispatch room are hired on the basis of aptitude, intelligence, and scramble tests. Obviously, the aptitude test shows up their mechanical ability, if any. If they show high mechanical ability, they are ear-marked for apprenticeships in the composing room and other mechanical departments. If their aptitude tests show selling ability, they are then channeled into the advertising department as junior salesmen. Their intelligence test is also important, in fact, just as important as the aptitude test. The so-called scramble test is pretty accurate in telling us whether, in future years, a prospective employee will be a good one or a trouble maker.


Teamwork Between Metal and Router
Imperial Zinc
Under the router's bit—smooth and easy does it—with Imperial. Perfect teamwork between router and metal assure "close-up" without danger of chipping or breaking away.
Imperial
REGULAR
(Green Redibak)
Meets the requirements for all usual applications.
Imperial
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Alloyed for extra heavy duty. Unusually resistant to buckling.

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Lithographers' Dip in Profits Shown By Survey

LITHOGRAPHERS' profits are tending downward despite increases in sales volume. That was the import of a profit study summarized by W. Floyd Maxwell, executive director, Lithographers National Assoc. at LNA's 50th Anniversary Convention, Lake Placid Club, New York, June 20-23.

The LNA survey covered 170 lithographic firms whose net sales ranged from under $500 thousand to over $5 million. It revealed that 1954 profit margins showed a further sagging tendency and that for the four past years profits in the lithographic industry have averaged under 3.5%, despite a year-to-year increase in the industry's sales volume.

"The average profit position, both before and after taxes, for this year's 170 reporting companies is somewhat less favorable than for the 191 companies surveyed last year," Maxwell said. "For 1953 average net profit before taxes was 6.1% as against 5.6% in 1954. Average net profit after taxes in 1953 stood at 3.5% compared to 3.1% in 1954."

A comparison of the profit range between small and large lithographic plants showed that the "similarities are more striking than the dis-similarities," he said. "For the smaller companies, average net profits before taxes, in both 1953 and 1954, were slightly smaller on average than for the larger companies. Conversely, net profits, after taxes, on average were slightly higher."

In a separate analysis of the profit reports of 29 companies which were subject to the Excess Profits Tax in 1953, Maxwell found their "net profits after taxes remained unchanged at 4.2% in 1954. The net profit after taxes of 15 of the smaller companies dropped from 4.6% in 1953 to 4.2% in 1954 while for the 14 larger companies, it rose from 3.7% to 4.2%.

"It may surprise you," he said, "that of these 29 companies 15 had net sales of less than $1 million and of these 15, eight reported sales of less than $500 thousand. Of the 14 companies with net sales of over $1 million, nine were in the sales bracket of $1 million to $2.5 million while only three reported net sales of over $5 million."

Maxwell reported that the dollar sales of lithography in 1954 compared favorably with those for 1953, despite the fact that for business and industry generally 1954 had shown some recession from the preceding peak year.

Pass it Along

Many printing plant executives pass along copies of *Printing Equipment Engineer* regularly to interested employees in the plant. In this way, a more interested production organization will be maintained.

Carnegie Tech Expands Graphic Arts Courses

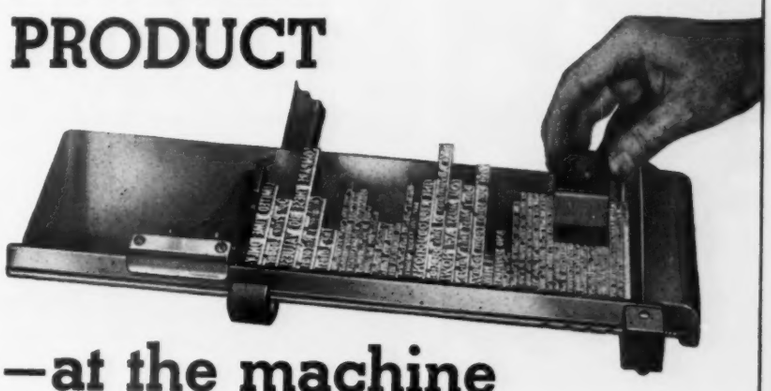
Demand for Carnegie Tech printing management graduates in the Graphic Arts industry has caused the school to extend its program of study. A greater variety in the curriculum will be introduced next fall and women will be admitted for the first time. Dean of the Printing Management School, Glen U. Cleeton, anticipates a 100% increase in the number of students which can be admitted in 1955 and an increase of 200% in 1956. "Such expansion," states Dean Cleeton, "is justified because the demand for graudates greatly exceeds the available supply."

The four and two year basic management options have been revised primarily to give the student greater freedom of electing management courses in his senior year. More instruction in photolithography has been included and courses in photographic composition have been instituted.

Students from other colleges and universities will now be eligible for admission in the two-year management option at the end of their junior year. In the past, only college graduates were admitted to this program, but now, juniors from other institutions will be considered for admission if they have maintained a B average in their subjects.

In addition to these changes, the School of Printing Management is inaugurating

FINISHED PRODUCT



—at the machine

Each slug drops to the galley of a Mohr Saw-equipped Linotype or Intertype accurately sawed to length —ready for immediate use "as is."

The finished product is instantly available. Any odd measure matter can be sawed to length right at the machine—run-arounds, initials, contours, ad-guts, job work, corrections.

Just set the Mohr Saw dial at 10 picas, 20 picas, 25 picas 3 points—or to any measure. The slug is sawed automatically, instantly, accurately.

Save liner changes, reduce liner investment and expense. Cast slugs to a standard 30 picas and automatically saw them to length. On combination machines a liner can be used for text, while retaining the flexibility of the full 30 picas for display.

Thousands of Mohr Saws are saving time and money in composing rooms all over the world—daily newspapers, weekly newspapers, job plants and trade plants. If you have slugs to saw—whether for one or one hundred line casting machines—the Mohr Saw is a real money-maker.

Learn the complete story of the Mohr Saw.
Write for the free booklet "Any Measure."

MOHR LINO-SAW COMPANY

8015 North Ridgeway, Skokie, Illinois

two new four-year programs, a Graphic Arts technical option and a Graphic Arts design option. The technical option will combine the study of Graphic Arts processes with science and elements of engineering technology. Resulting from a demand for graduates who can contribute to the technological advancement of the Graphic Arts processes, the course will concentrate on the application of scientific principles and analytic techniques to Graphic Arts production and development problems. The technical option will be open to qualified high school graduates who demonstrate special aptitude in science and mathematics. During their freshmen and sophomore years, students admitted to the technical option will pursue a sequence of pre-engineering subjects in combination with studies in the humanistic-social area and the Graphic Arts techniques. In the junior and senior year, the program of each student will be arranged to suit individual interests and needs. The Graphic Arts design option was tailored to fit demands of printing firms and other agencies which plan, design and prepare art work for printed products.

These innovations and expanded curricula will enable the Carnegie Tech School of Printing Management to provide professional education for all phases of printing and allied industries.

Many of our readers will respond to your Want Ads in the Classified Section of *Printing Equipment Engineer*.

Atmospheric Conditions

(Continued from Page 61)

Bahnson Humiduct

Another unit is the Bahnson Humiduct previously referred to in connection with humidification only. To the duct with the fan, evaporator, recirculating and fresh air dampers are added heating and cooling coils (often a single coil) for winter and summer operation respectively.

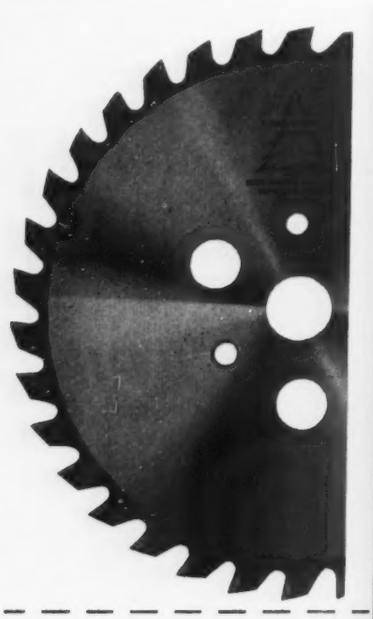
A certain limited amount of cooling is achieved by the evaporation of the moisture according to the following sequence: When evaporation begins, the temperature of the room drops due to the heat thus absorbed. When the desired humidity has been reached, addition of moisture to the air is stopped by the controls. The temperature of the room then increases because of the operation of the motors and the presence of the workers. When the temperature has risen to the pre-determined level, the fresh air damper is automatically opened and admits dry, fresh, cool air, which causes the evaporator to start up again and the cycle is repeated. The possibilities of this method of cooling, of course, are limited by the wet bulb temperature of the outside air in summer.

Consequently, in order to maintain constant temperature and relative humidity around the year, it is necessary to provide refrigeration for cooling the outside air in summer. This is accomplished in the Bahnson units by coils forming part of the unit through which chilled water is circulated to cool the air in summer. In winter, steam is circulated through these coils to warm the outside air.

Westinghouse Unit

Westinghouse also makes a small air conditioning unit in the form of a fair sized cabinet suitable for limited areas which does not call for duct work. It may also be moved from one location to another without undue trouble if desired. It is known as the Unitaire Conditioner. An interesting installation of this unit was made in a New England printing plant where the upper portion of the building had been completely air conditioned but where it later became necessary to install a two-color press in the basement where it is particularly damp. As the existing air conditioning system did not reach this space it was decided to install one of the Unitaire Conditioners in a room made by partitioning off sufficient area for the new press. In this way, it is possible to maintain constant relative humidity and temperature the year round, and consequently to turn out first class work efficiently according to predetermined production schedules.

Where complete air conditioning is to be accomplished, which includes year-round temperature and humidity control as well as filtering and ventilation, a central station system is quite often used. It is believed that in the future more installations of this will be installed. The



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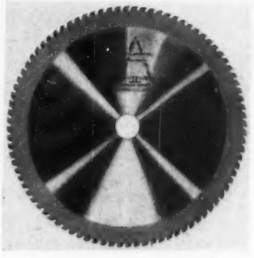
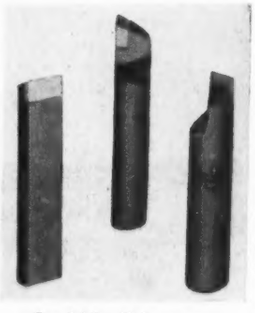


Immediate Delivery



Carbide Trimmers

term, central station, is applied to systems having the main air conditioning apparatus in an apparatus room, penthouse, or other enclosure remote from the rooms being conditioned.

In this case, refrigeration is employed for cooling and dehumidification and the coils for cooling and heating are included in addition to the fan, discharge ductwork and refrigeration compressor. In other central station systems an air washer may be employed rather than heating and cooling coils. In the air washer, sprays are used to treat the air, the temperature of the water being varied by heating and refrigeration so that the air delivered to the room is of the proper temperature and relative humidity to maintain the desired conditions.

Central station systems differ from unit systems in that both the apparatus and distribution ductwork are individually designed for each job. Various components of the system may be located at the most advantageous places so that proper distribution of the air will be accomplished. Unit systems, on the other hand, have the advantage of the lower production costs of mass-produced units which are located in the room to give the best practicable uniformity of temperature and relative humidity.

In Fig. 9 is shown the type of rectangular ductwork with numerous air discharge grilles normally employed with central station systems. The grilles are located to distribute the air properly after due consideration is given to heating and cooling loads and to the location of the equipment, desirable air velocities, etc.

Central Station Conditioning

An excellent example of a central station air conditioning system exists at the plant of the Dallas (Tex.) *Morning News*. This 300 T. Carrier refrigeration installation serves the entire plant, excluding the basement, pressroom and stereo departments which are not air conditioned. The exhaust air from the office building and mail room forms a part of the ventilating air for the pressroom. Exhaust fans in the latter pull the pressroom air through American rotating curtain filters and maintain a negative pressure in the pressroom to reduce ink mist in the rest of the building.

The exhaust air from the composing room passes through the stereotype department to provide some small measure of benefit. The office building is served by air handling units on each floor and zoned for control into three sections, namely, North, East and West.

The air conditioning equipment is located on the fifth floor level in the elevator penthouse.

At Brown & Bigelow

Turning again to the Brown & Bigelow plant in St. Paul, Minn., with reference to which the use of humidifiers in certain departments was considered, it is interesting to note that the company has complete central station year round air conditioning in another department. That is, complete control of temperature and humidity is provided for the Roto Etch room to stabilize the size and the speed of development of carbon tissue.

This area includes 2500 sq. ft. of floor space, with a uniform ceiling height of 10 ft. The construction of the room, which is enclosed in a mill-type building, is largely of wood studding and double plywood facing. Aluminum foil vapor barriers and rock wool insulation are used in the walls and ceiling, the latter being suspended from the trusses of the main building. Air conditioning ducts are mounted above the ceiling. The ducts are double, containing both inlet and return pipes. They are made of galvanized iron and thoroughly insulated with Ultralite No. 300 duct insulation. The air supply and return is controlled through 10 A.C. Anemostats, (Anemostat Corp. of America), which are combination fixtures for supply and exhaust air with one opening in the form of an annular ring. They are mounted flush with the ceiling.

The design requirements for the system are for a controlled dry bulb temperature of 72 deg. F., plus or minus 1 deg., with a relative humidity of 57%, plus or minus 1%. The heat load here is influenced by 20 fluorescent lighting fixtures containing two 100 w. tubes each; and by a normal personnel consisting of 12 people employed at occupations equivalent to mild exercise.

The equipment is sized to take care of a total volume of 6000 cu. ft. of air per min. A separate exhaust system of 1500 cu. ft. per minute capacity is used for exhausting acid fumes. A fresh air inlet

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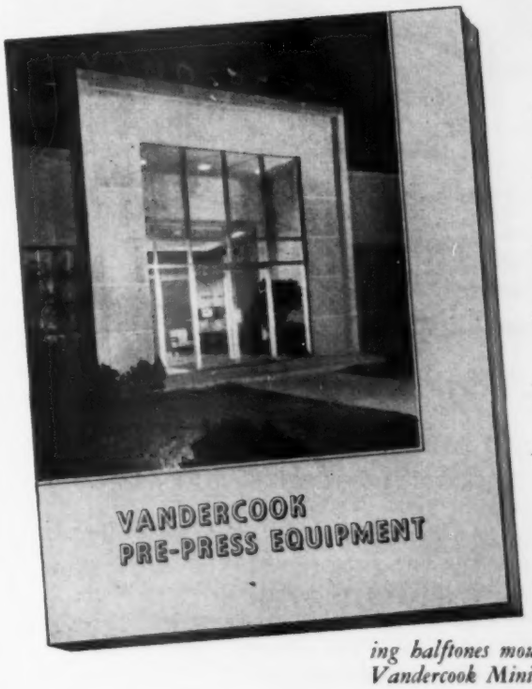
Vandercook Pre-Press Equipment . . .

Including 24 models of proof presses and test presses—hand and power operated—ranging in price from $175 and up.



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- ***the Vandercook Minimum Makeready System***

This catalog is an example of the fine quality letterpress which can be printed with practically no makeready, using halftones mounted on "Lite-Base" and the Vandercook Minimum Makeready System.

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VANDERCOOK Minimum Makeready System

with suitable filters brings in air from the main building outside the air conditioned area.

The air conditioning unit, which is a C215 air conditioner, manufactured by the U. S. Air Conditioning Co., contains a throw-away filter section, mixing chamber, a four row direct expansion coil, a one row steam distributing coil, and a steam jet humidifier. It is driven by a 3 h.p. motor, and is mounted above the trusses of the main building adjacent to the conditioned area. The refrigeration unit is a York 15 T. compressor mounted on the floor almost directly under the air conditioning unit. Automatic controls for temperature and humidity were supplied by the Minneapolis-Honeywell Regulator Co.

Printing Industry Safer Than Most

By H. G. JIM HAYS*

**General Manager of the Ohio Safety Council and Technical Consultant to the Cleveland organization. Abstract of address delivered before meeting of the Cleveland Club of Printing House Craftsmen, May, 1955.*

ONE of the first things any industrial group likes to know is how its accident experience compares with industry generally. It also likes to know whether the experience is improving or worsening.

The injury rates for the year 1954 are not yet available. We find that in 1953 printing and publishing was approximately 13% safer than the average of all industries reporting to the National Safety Council. We also find that the injury rate has been reduced 20% in that year. It's apparent that printing house craftsmen are in less danger than most employed persons. The severity of injury within the craft is but a little more than half the average for all industry.

Each industry has some variation from the general pattern of accidents. Frequently this variation is of little consequence. But it must be recognized else persons within the industry have little faith in the procedures that are suggested.

The *Safety Manual for the Graphic Arts Industry*, developed and published by the Education Council of the Graphic Arts Industry, Inc., and the National Safety Council, lists seven major groups of accidents in the printing industry: Handling objects, machinery, falls of persons, foreign body in the eye, striking objects, hand tools, and falling objects. No other type of accident makes up as much as 5% of the total included in the analysis.

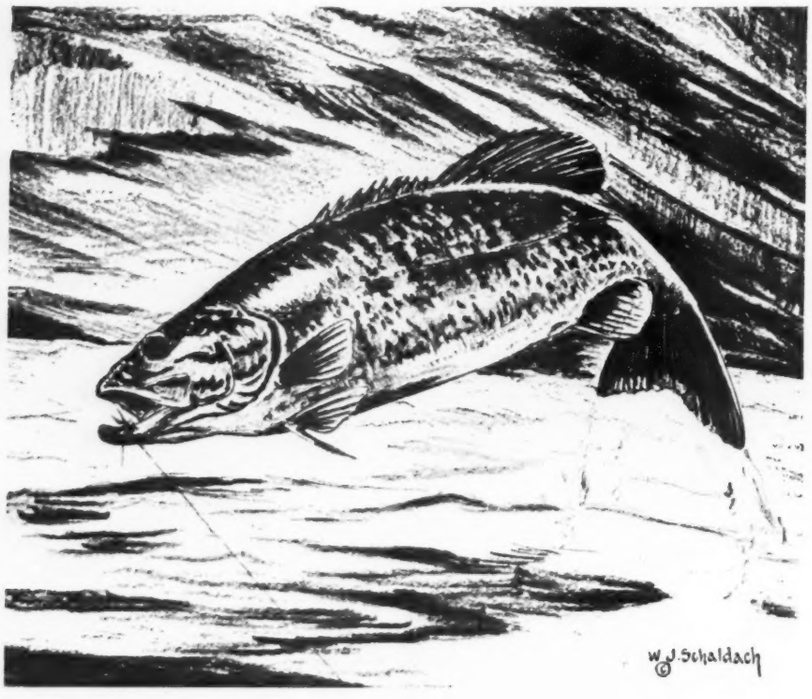
The printing industry like all others suffers most of its accidents when persons are handling objects. However, the percentage in printing is much higher than average—27.2% of injuries in printing come from handling things. Skids and scows are first in frequency of being involved in accidents, followed by strains and miscellaneous objects. Rollers, hand trucks and then all other things not tools that one must use in print shops follow in that order.

About half of all handling accidents are caused by improper methods of picking up and setting down objects. The following practices, continually followed, should reduce accidents of this character: 1. Keep the load close to the body. 2. Get a good footing and a solid grip on the object. 3. Bend the knees and keep the back straight. 4. Lift with the leg muscles, the most powerful in the body. 5. Get help for heavy or awkward loads, and lift as a team.

Men seldom are willing to call for help or use mechanical aids in lifting heavy or awkward loads. They frequently complain that they can't wait; it takes too much time. Yet the job is certainly delayed far more when the roller, make-up type, or other object crashes to the floor.

Accidents involving machinery run a poor second in the printing industry. They account for 16.2% of the total. Setting up and washing presses leads by a narrow margin. Cleaning and adjusting presses while in motion is almost as frequent. Together these two practices account for ⅔ of the injuries where machinery is involved . . . I am inclined to believe that any of the set-up accidents involving power presses could have been prevented had the supervisor detected or corrected short cuts which the set-up man or operator was using.

It is a peculiar thing that a workman is not so likely to be hurt on or around



It'll take More than Bait- to land Him!

Skill, experience and tested tackle must be included in the successful fisherman's kit. The same requirements apply to photoengravers. To back up their skill and experience they must use *dependable* engraving metals.

That's why smooth-etching Zomo Electric Zinc – long-wearing A-Z Electric Alloy – non-buckling Owl Brand and lightweight Zomag magnesium are widely used by go-ahead commercial engraving plants and newspapers.

QUICK CLEAN ETCHING
Uniform Composition • Accurate Gauge • Flawless Finish

ZOMO ELECTRIC ZINC • A-Z ELECTRIC ALLOY
OWL BRAND • ZOMAG

the machine for which he has a wholesome respect. If a machine is generally regarded as dangerous, all precautions usually are followed. It is the commonplace, the ordinary situation to which no one gives much attention, that produces most of our injuries.

The printing industry differs from most industries in that falls of persons rank third instead of second as a major cause of injuries as is general. If I were pressed for the reason, I would say that perhaps the fact that housekeeping is a little better in the printing industry accounts for it . . . Disorder or inadequate housekeeping is a factor in a great many accidents . . . The pressroom where folks pick stuff up off the floor, keep oil and ink wiped up removes a large percentage of its accident causes.

Some people never learn that you can get more material in a given space if it is placed in an orderly manner. Others seem ignorant of the need for aisles or walkways so men and material may move about the shop. A skid of paper, the handle of a lift truck, or even a small box has no business remaining in an aisle. Each minute that it remains increases the possibility that someone will bump into it and injure himself or damage valuable property.

Eye injuries and those involving hand tools generally are the result of improper procedure . . . Whenever particles are flying about, there is more than little chance that one or more will come to rest in somebody's eye. Yet I don't recall seeing anyone in a pressroom wearing eye protection whether he is casting metal, sawing a cut or doing any other task that produces flying particles. *Your percentage of eye cases is double the average for industry*, and I think this condition can be traced to the absence of protection rather than comparative hazard.

There is a temptation to dismiss hand tools with the remark that the trouble is not with the tool but with the user. That is generally true because 85% of tool injuries come from unsafe use of tools and only 15% from defective tools. It is difficult to understand why an experienced craftsman will attempt to work with makeshift or defective tools when the same craftsman would not tolerate makeshift or defective final products.

What can you do to improve the situation?

1. Discover the hazards and unsafe acts which produce accidents.
2. Eliminate as many hazards as possible.
3. Develop in each person the habit of safe performance.

The printing industry has proven time and time again that it is able to turn out high quality work without serious injury to the mechanics. The longest known record is of Pullman Press, Chicago, with no disabling injury since 1925. There are many printing firms that have operated over a million manhours without a disabling injury. So it is possible.

The poorest showing in the printing industry, as in industry generally, is in the size of company with less than 100 employees. And the reason can be summed up in two words—"inadequate supervision." . . . Sometimes supervisors object that deviation from standard safe procedures is of no consequence. They say that they would get nothing else done if they were obliged to correct improper procedures every time they see one.

These supervisors are missing the boat. When workmen discover that they can *not* get away with short cuts they will follow the standard procedures. After a little while, the need for admonition and reminder will diminish. It should, however, be continued in some degree.

Accidents result from a combination of unsafe conditions and unsafe acts. Most of these conditions can be changed by the supervisor of the work place. Practically all of the unsafe acts can be converted to safe ones if the supervisor is alert and insists that standard safe practices be followed. The supervisor, in turn, must be convinced that the hazard, the unsafe act, which hurt someone elsewhere, can and will hurt someone in his pressroom.

Safety in the printing plant is achieved by orderly housekeeping, and careful, skillful craftsmanship in every task. It is the supervisor's responsibility to see that this is done.

Please take a look at your address on the wrapper in which *Printing Equipment Engineer* is sent to you at your place of employment. If it isn't correct, please tell us about it on a postcard.

TINGULOK "the most economical and the simplest system of blanketing rotary presses"

PRESSMEN PREFER TINGULOK, because:

1. **Hands and fingers SAFE FROM INJURY in putting on blankets!**
2. **Blankets put on in less time!**
3. **Blankets more securely attached to impression cylinders!**
4. **Blankets do not shift or walk from side to side!**

BEAT THE CLOCK!

TINGULOK blanket system helps to "BEAT THE CLOCK"! Whether you are making a routine change or a change during the run, with TINGULOK you are running sooner!

TINGULOK Flaps and Blankets are made up complete . . . no preparation of Blankets and Drawsheets necessary!

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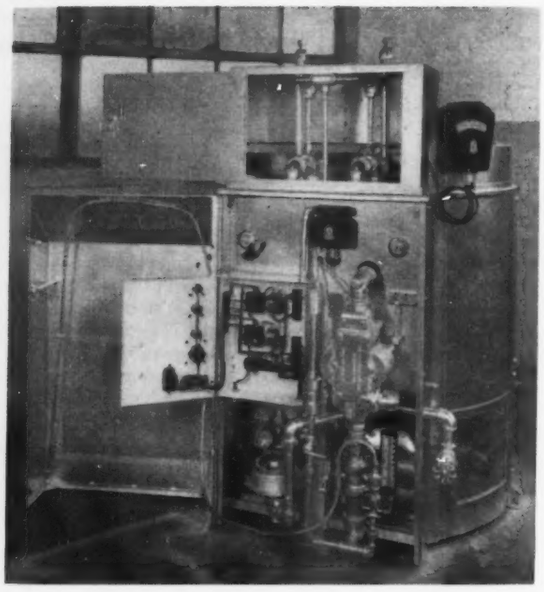
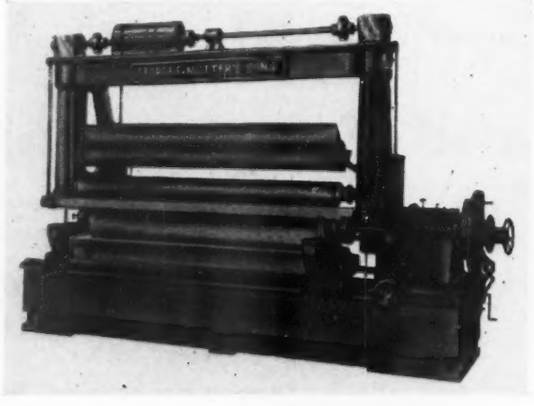
507 Bishop Street, N. W., Atlanta, Ga. ..... ATwood 3864
1227 Wabash Avenue, Chicago 5, Ill. ..... HArrison 7-0083
723 E. Washington Blvd., Los Angeles, Calif. .... PRospect 6023



The Kemp Model 36 CTF Stereotype Metal Pot has been designed for operation with the Pony type of plate casting box. Metal capacity is 6500 lbs. and casting rate is 30 plates per hr., states manufacturer, The C. M. Kemp Mfg. Co. Distinguishing feature of the pot is that it is a self-contained operating unit in that all equipment and controls are mounted within the cabinet. In the accompanying illustration the cabinet doors have been opened to show how this has been done. All controls and mechanisms are easily accessible. Dimensions of the complete unit are: 46 in. wide, 54 in. deep and 61¾ in. high. Natural, Propane or manufactured gas may be used. The immersion heating equipment together with automatic controls are designed to maintain metal temperature at 600 deg. F. plus or minus 5 deg. Max. fuel requirement is 150,000 BTU per hr. An auxiliary controller cuts off the fuel supply in event of excessive metal temperature. Electric power is derived from a ¼ h.p. motor, 110 v., s.ph., 60 cy. Thermocouple type of flame safety cuts off fuel supply in event of flame failure. Kemp Series "S" industrial carburetor is employed for the mixing device. The welded steel heating units are of the recirculating type. An exhaust cap deflects hot inert gas over metal surface to reduce dross. Bottom and sides of the pot are insulated. Metal pot itself is welded reinforced steel. The hood is welded steel with access door and stack connection. Please mention PEE No. 520 when requesting further information.



A variable size transfer machine has been developed by George F. Motter's Sons for precision laydown of carbon tissues for close register on rotogravure cylinders. The machine is available in two sizes. The larger size for wide web use will accommodate cylinders having face widths ranging from 24 in. to 92 in. and circumferences of from 20 in. to 60 in. The smaller model for narrow webs handles cylinders of from 12 in. to 55 in. face width and from 12 in. to 50 in. circumference. By turning a crank handle, frames are moved to desired position to accommodate the particular cylinder face width. Features which contribute to register in the placement of the carbon tissues are: (1) Indexing wheel with equally spaced slots to govern the circumferential positioning of pages on the cylinder; (2) side register mechanism, operated by a hand wheel, to provide lateral adjustment of the cylinder and (3) a retractable bridge at the rear, operated by a hand wheel through pinions and racks, providing a vernier setting for the marking and relocating device and cross-hair marker.

Bridge is equipped with scales graduated in inches or millimeters. The marking and relocating device, mounted on the ways of the bridge, can be moved the complete width of the cylinder. The scriber point is mounted in a swivel so that a cross mark can be made at any desired position. This device allows the operator to mark a center point anywhere on the cylinder before the register laydown process is started. Cross hairs under glass enable accurate resetting.

A carbon-tissue guide directs the tissue while it is being transferred to the copper intaglio cylinder and shields it from the water being applied to the cylinder. The squeegee roller, parallel to the intaglio cylinder, gives positive control of the carbon tissue at all points of contact. A motorized mechanism raises or lowers the squeegee roller.

The chromium-plated bridge that holds and clamps the laydown bar is counter-balanced for ease in elevating it out of position after the carbon tissue has been registered. The laydown bar is furnished with either register pins or with holes to contain separate register lugs or pins. It is located by a fixed stop and is fastened into the bridge by removable screws.

Staggered roller-bearing assemblies are furnished for mounting the intaglio cylinder in the main bearings. Other types of adapters to fit the cylinder journals to the bearings may be used. The cylinder is loaded from a cylinder-handling truck or crane over loading bars into the bearing seats and unloaded in the same fashion. The machine is built so that a ½ h.p. drive motor and variable-speed gear unit may be added to rotate the cylinder in either direction. For further details, please mention PEE No. 532 in your request.

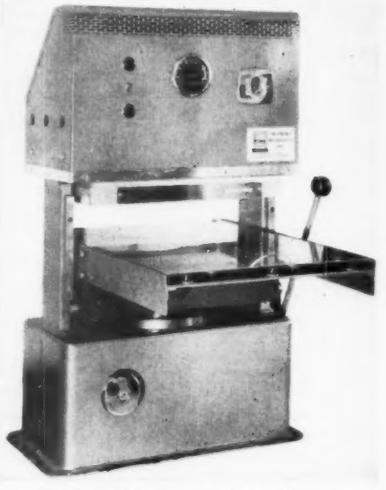
Equipment & Supplies

(Continued from Page 38)

paper and placed face down upon a glass exposure plate. An electric timer automatically flicks lights on and off. The exposed sheet then is fed into the processing unit where an exact copy is produced. For further details, please mention PEE No. 500 in your request.

Plastic and Rubber Platemaker

The Pasadena Hydraulics, Inc. recently introduced a line of plastic and rubber platemaking presses as an addition to its



line of hydraulic presses. The platemakers are equipped with platens, containing cast-in 230 v., 3000 w. calrods for fast heating, range in size from 12½ in. by 12½ in. to 18½ in. by 18½ in. Each platen contains a mercury thermometer and is controlled to 600 deg. F. by Fenwal thermoswitches. Maximum pressures vary in the line from 30 T. to 70 T. An instrument cabinet includes mechanical cycle timer; pressure gauge; indicator lights, cut-off switch and encloses electrical controls. A two stage hydraulic pump closes platens and produces pressure. A stainless steel tray gliding on ball casters is provided for transferral of work. For further details, please mention PEE No. 510 in your request.

Printing Education

Formal education in the printing field, or lack of it, has been a subject of interest among printers and those interested in the field. California State Polytechnic College in San Luis Obispo is helping to solve the problem by its Printing Production and Field Engineering department. A. M. Fellows, director of printing at Poly Cal., founded the printing course in 1946 and since then it has been going strong. As mentioned in a booklet prepared by Poly Cal printing students, the four year course culminates in a Bachelor of Science degree with a major in printing. The printing department is fully equipped with typesetting machines, presses, cutters, stitchers and other related printing equipment for the complete education of the students. Besides courses in printing such as composition, typesetting and printing office management, students must meet all requirements in general engineering and must take courses in journalism.

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Rust Resistant
BLACK BEAUTY STEEL
has greater accuracy at lower costs

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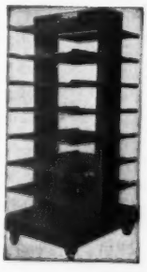

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$62.00

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Imperial Plus Metal—if added pound for pound of dross when remelting—replaces these dross losses and restores your metal to its correct working analysis.

Thousands of newspapers and commercial printing plants are using this easy, economical way of keeping a lid on type metal costs. If you are not, we'll be glad to discuss this Imperial service with you.

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Hammond 5-col EasyKaster 18" deep
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Matrix packing table
Sta Hi dry mat scorcher
1,200 lb metal pot

AMERICAN PUBLISHERS SUPPLY, INC.
P. O. Box 421 LYNNFIELD, MASS.

Equipment Sales and Installations Reports

Wood Newspaper Machinery

BISMARCK (N.D.) *TRIBUNE* ordered a Wood Standard Pony Autoplate Machine to be installed in its plant. The machine will be equipped with a Water Cooled Arch, vacuum system, Pony Pump and Pneumatic Pumping Device. The Tribune Company operates a commercial printing plant and bindery in addition to publishing the daily newspaper.

TRI-CITY (WASH.) *HERALD* has ordered another Wood Standard Pony Autoplate according to announcement by the Wood Newspaper Machinery Corp. The stereotype plate casting machine will be equipped with Water Cooled Arch,

double-page mechanism, vacuum equipment, Pneumatic Pump and a 6000 lb. metal furnace. The *Tri-City Herald* serves the three Washington cities of Pasco, Kennewick and Richland, located on the Columbia river. A rapid growth in population has made it necessary for the *Herald* to erect a new plant to house its mechanical facilities.

ROWLEY NEWSPAPERS has ordered Wood Standard Pony Autoplate Machine for Painesville (O.) *Telegraph* as part of an extension program. The Standard Pony will be equipped with Water Cooled Arch, vacuum system, Spout and Pneumatic Pumping Device. The *Telegraph* is presently erecting a two story building which will house its mechanical departments. Facilities for mailing and paper storage are included in the new building.

ORLANDO (FLA.) *SENTINAL-STAR*—The Wood Newspaper Machinery Corp. announced the purchase of a new Heavy Duty Pony Autoplate by the *Sentinal-Star*. This is

the second Wood Autoplate purchased by Orlando Daily Newspaper, Inc. within the past two years. The Orlando *Sentinal, Daily* and *Sunday*, and the Orlando *Evening Star*, daily, combine to form one of Florida's fast growing newspapers. They are one of the few papers which print a three color and black cartoon in daily editions.

STAR PUBLICATIONS—William Press, Inc., Chicago Heights, Ill., publishers of the Park Forest *Star*, Homewood-Flossmoor *Star* and the Chicago Heights *Star*, semi-weekly newspapers, have added a Wood Newspaper Machinery Corp. Standard Pony Autoplate machine to their stereotype department. In anticipation of an annual circulation growth, a new addition to the *Star* plant is under construction which will house their press and stereotyping departments.

ROCHESTER (MINN.) *POST-BULLETIN* has placed an order for a Wood Standard Pony Autoplate Machine equipped with Water Cooled Arch, vacuum system and Pneumatic Pumping Device. The new machine is to be installed in the new building being erected in Rochester. Established in 1889, the *Post* consolidated with the *Bulletin* in 1925 and now has a daily circulation in excess of 20,000.

•

Miller Installation

ARROW PRESS, INC. recently installed a third Miller TY Press, manufactured by The Miller Printing Machinery Co. The installation is a further development in the company's expansion program.

•

Miehle Installation

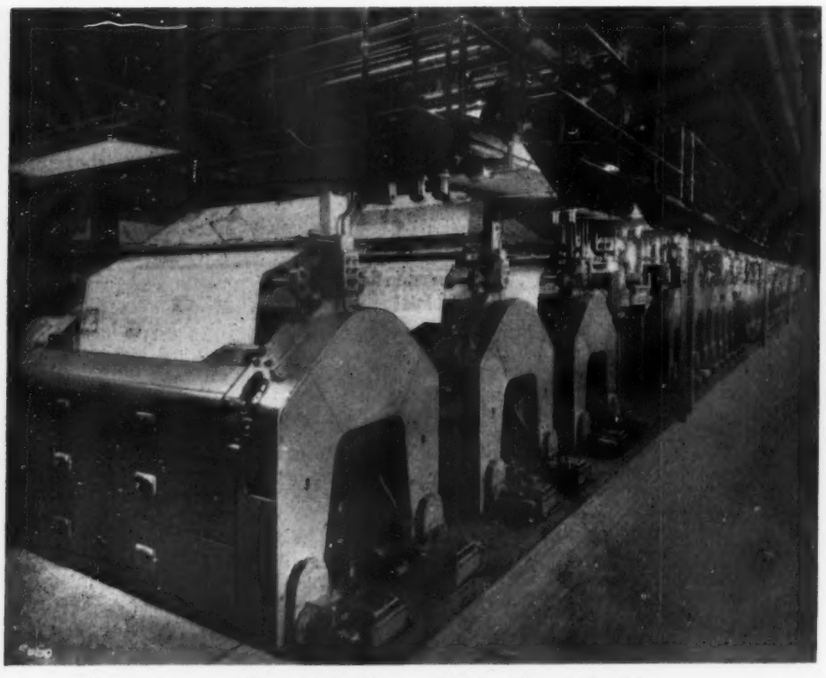
LITHOPRINT—The Miehle Company has announced that a Lithoprint has been installed in the plant of Lont & Overcamp Pub. Co., Paterson, N. J. In honor of the installation

of the 100th Lithoprint, Mellick, Miehle vice president in charge of sales, and Steed, New York manager of Miehle, observed the installation with Nicholas Lont, of the Lont & Overcamp Co. Lont operates two Miehle Verticals in his job department and the new Lithoprint will supplement these machines.

•

R. Hoe & Co., Inc.

LOS ANGELES (CALIF) *TIMES-MIRROR NEWS* has purchased 16 black and white Color Convertible Press units, making a total of 89 R. Hoe & Co., Inc. units. The new order also includes three folders and eight color cylinders. All plate or type cylinders are to be equipped with the Hoe underside lockup device. With the new equipment installed by the first of the year, the *Times-Mirror News* pressroom will be laid out in three lines, the already installed units in two lines of 32 units each and the additional 16 units in a third line.



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Mfrs. of Lubricating Products since 1868 LINDEN, NEW JERSEY

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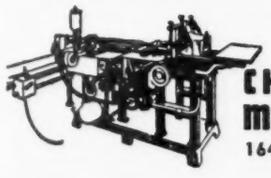
100,000,000 mailings per month on Cheshire machines. Earlier models still operating after 24 years' constant use.

* An addition to, not a replacement of, your present addressing system. Apply roll strip or continuous pack form labels.



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Have You the PENCIL-CHEWING WORRIES Over Mat Problems?

SWITCH TO

BEVERIDGE MATS!

If you are chewing your pencil over mat reproduction or shrinkage problems, switch to Beveridge mats. Beveridge's smooth face picks up the dots easily, gives clean release of the plate in casting and offers exceptionally deep moulding qualities. Rid yourself of mat worries—get sharp, faithful reproductions with minimum make-overs . . . that means use only BEVERIDGE Mats. Write today!

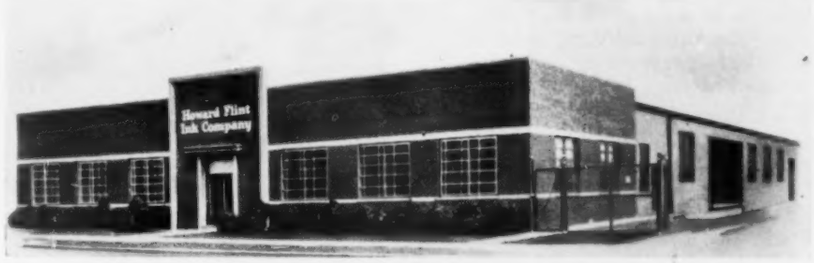
NEW PRODUCTS DIVISION
BEVERIDGE PAPER CO.
Indianapolis 4, Indiana

NEWS ITEMS

Hoe Executive Appointments—Two executive appointments have been announced by J. L. Auer, president of R. Hoe & Co., Inc. George Lenart is now assistant treasurer in charge of accounting, budgeting and cost functions. He has been associated with R. Hoe & Co. in a consulting capacity and was connected with Wyman P. Fiske Associates, management consultants. Lenart is a graduate of the Harvard School of Business. The other appointment is of W. J. Robinson to Hoe's southern sales office in Birmingham, Ala. In the past, Robinson worked in the pressroom of leading newspapers in a supervisory capacity, his last connection being with the Miami (Fla.) *Daily News*.

LENART

ROBINSON



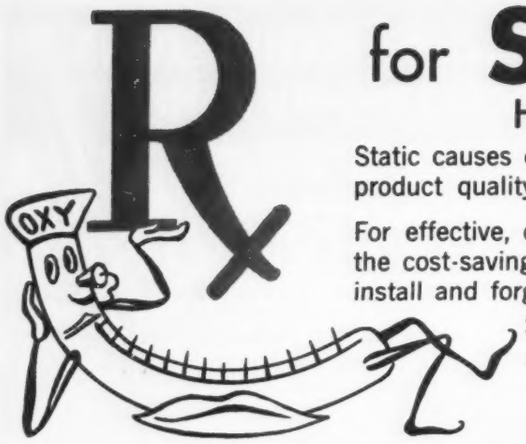
Cleveland Ink Factory Opening—The Howard Flint Ink Co. announced the opening of its newest factory in Cleveland. The factory, located at 3905 W. 150th St., has 28,000 sq. ft. of manufacturing space and is served by a private siding of the New York Central Railroad. E. B. Flint, president of the Howard Flint Ink Co., stated that ink consumed throughout Ohio and Pennsylvania, previously produced in Detroit, will now be manufactured in the Cleveland plant. New mixing, milling and testing equipment has been installed. A fleet of tank trucks will deliver Cleveland made newspaper inks to 45 daily newspapers throughout Ohio and Pennsylvania. Dan Farlin will manage the factory and Wm. Sticklorath is in charge of development and production.

Traffic Expert Honored — Paul C. Gustafson, traffic manager of the Miehle Printing Press & Mfg. Co., was honored by associates on his completion of 35 years service with the company. Gustafson joined Miehle in 1920 after experience with a number of transportation and industrial companies.

Manages Sales Region — Gerard Lionetti was appointed to the newly created position of regional sales manager for the Eastern Division of Heidelberg Eastern, Inc., according to Charles T. Pope, executive vice president of the firm. Lionetti will manage a sales region covering New York, N. Y., New Jersey, Maryland, Delaware, District of Columbia, eastern and central Pennsylvania, and Virginia.

LIONETTI

Special Summer Course—For the second year, Riegel Paper Corp. will sponsor a special course this summer in printing at Carnegie Institute of Technology exclusively for members of its sales department. The course will be directed by the faculty of Carnegie's Department of Printing Management. Twelve men from Riegel's Manufacturing, Research and Sales Divisions will



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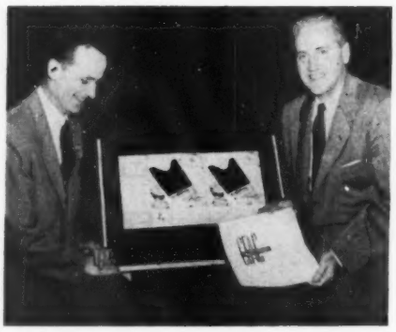
enter the course which will include study of inks, rollers, making printing plates, makeready, and paper performance. The Institute is provided with a wide range of printing equipment to supplement the classroom instructions.

Miehle Wins Advertising Award—The 1955 award for the best direct mail piece covering both industrial and consumer campaigns, as sponsored by the Chicago Federated Advertising Club, was recently given to Miehle Printing Press & Mfg. Co. The winning six page folder was printed by letterpress on one side and by offset on the other side. Taking advantage of the gate fold effect of a six page folder, two reproductions of the same four color process subject appear side by side, one being offset and the other letterpress. The folder entitled



"It's Up To You", illustrates Miehle offset and letterpress equipment and tells of Miehle's belief that both processes will continue to have a place in the Graphic Arts industry. Pictured here are Ross Runkle, (left) Runkle-Thompson-Kovats, Inc., Chicago, the company which printed the winning folder; and Carlton Mellick (right), vice president of Miehle.

ATF Service Organization—L. C. Edgar, executive vice president of American Type Founders, recently announced changes in the ATF Service Organization. W. W. Fisher, vice president in charge of operations, will assume responsibility for field service and repair parts under the supervision of E. Roth, general service manager. Another step is the establishment of service parts centers in San Francisco, Chicago, Atlanta, Ga., and Elizabeth, N. J., which will be under the direction of E. Cudney, repair parts supervisor, with local supervisors in each location. Roth will be assisted by A. Steyer on web fed press installation and service, by J. Grupallo on ATF sheet fed presses and by E. Hinkel on Mann presses.

Banquet Speaker at Carnegie Tech's recent alumni seminar-reunion for graduates of the School of Printing Management was George S. Dively (left), chairman and president of Harris-Seybold Co. On the right is Glen U. Cleeton, dean of the print-

ing school. At the banquet, Dean Cleeton announced that the Harris-Seybold Foundation has established two scholarships at the School of Printing Management.

Breakfast for Bennys—Final arrangements are being made for the annual breakfast, sponsored by Miller Printing Machinery Co., at which prize winners will be announced for the 1955 Printing Industry of America, Inc. Printers' and Lithographers' Self Advertising Exhibition and Awards.

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the desk-size, easy-to-use machine providing publications coast to coast with modern, wanted display type.

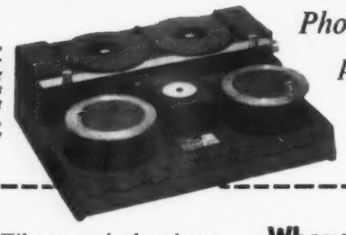

Photo-composition machine produces hundreds of popular headline type faces

What The Filmotype is the photo-composition machine that produces headlines in a complete selection of all modern type styles and sizes from 12 point to 144 point (as well as 400 "new design" hand lettering alphabets).

Where In your newspaper, Filmotype will add versatility and eye appeal to both editorial make-up and advertising. At a cost of pennies, you can run display type in any style you choose . . . including scripts and other lettering!

When The vital battle against deadline is a snap to win! With Filmotype, almost instantly produce sharp display type perfect for reproduction!

Who *Anyone* becomes a Filmotype expert after less than an hour of instruction! NOTE: the Filmotype is a perfect mate for the new engraving machines, too.

Why Offer the attention-catching abilities of Filmotype to your advertisers at amazing economy. Every advertisement becomes a standout!

All display type in this ad Filmotype, of course. Write today for full details and FREE demonstration.

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NUMBERING
always pays off

CONTINUOUS FORMS
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FORCE ROTARY HEADS

Now, number forms with high-speed accuracy, top profits. Force MH or DU Rotary Heads (both available either straight or convex) are designed for today's fastest presses. Let us send catalog.

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Peggy Wood, star of stage, movies and television, and best known for her role in TV's "Mama," will be the guest of honor and will award the Benjamin Franklin statuettes and other prizes. The breakfast will be held at 8:30 a.m. on Tuesday, Oct. 18, at the P.I.A. convention. This year it's at Atlantic City. Toastmaster will by W. H. Walling, president of P.I.A.

George McKibbin Expansion — Samuel Schulman, president of George McKibbin & Son, Brooklyn, N. Y., book manufacturers, announced an expansion of the company. The expansion, which will be completed this year, calls for the erection of a new plant in Brattleboro, Vt., now under construction (See March 1955 issue of *Printing Equipment Engineer*, page 67), and the enlargement of existing facilities in Brooklyn, Schulman said. When construction is completed, the company will be capable of manufacturing 20 million hard bound books a year. The new Brattleboro plant will provide 103 thousand sq. ft. of working space on one level. It is being built on a 16 A. site to permit further expansion. Additional bindery equipment is being installed in the Brattleboro plant, but the greater portion of the binding will be done in the present plant in Bush Terminal, Brooklyn, where additional equipment also is being installed. The company now occupies more than a quarter of a million square feet of space in Brooklyn.

SCHULMAN

IMS Sponsors Contest—The Industrial Management Society is sponsoring a methods improvement contest featuring the Ralph H. Landes awards. The competition is open to industrial and educational institutions. Improvement presentation is by a film not longer than 15 min. in length. Judging is by men selected from the industrial engineering field and awards will be made at the IMS Annual Time and Motion Study Clinic to be held in November at the Sherman Hotel in Chicago. The contest makes use of the principles of work simplification and the entries will be judged on the basis of group or individual effort, recognition, flash idea or systematic approach of methods improvement, savings and reduction of fatigue. Additional information may be obtained from the Industrial Management Society, 35 E. Wacker Dr., Chicago 1.

Miehle Sales Force Expands—The Miehle Printing Press and Mfg. Co. announced three recent additions to its sales force in the New York office which is under the management of Norman T. Steel. All three men, William H. Hammett, jr., Edgar E. Hartt and Bert S. Steiner, will cover the New York, N. Y., territory in addition to an outlying territory. Hammett will be responsible for Connecticut and the Lower Hudson River Valley. He came to New York after representing Miehle in the Cincinnati, O., and Minneapolis, Minn., territories. Hartt will be responsible for Long Island including Brooklyn and Queens. He is a graduate of the School of Printing Management at Carnegie Institute of Technology and has had supervisory experience in printing plants. Steiner will be responsible for upstate New York including the Buffalo, Rochester and Syracuse regions. He joined Miehle 18 mos. ago after sales and industrial experience in St. Louis, Mo.

HAMMETT HARTT STEINER

Two Ideal Appointees—Ideal Roller & Mfg. Co. has added two sales representatives to its sales staff in Long Island City, N. Y. James J. Alymer and Michael N. Gioe are the two appointees. Both sales representatives are now taking their sales training at eastern division headquarters. Alymer and Gioe are graduates of Villanova College and St. John's University respectively.

Timken Receives Award—The American Society for Materials Handling at its annual awards meeting at the Hollenden Hotel in Cleveland named The Timken Roller Bearing Co. the recipient of a citation for the best installation of a materials handling system in production in northeastern Ohio. The award to outstanding

For the Engraver . . .

MULLER TOOLS

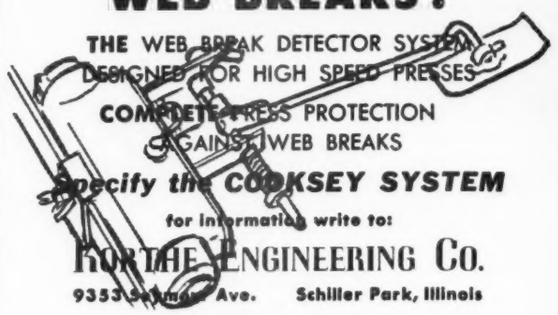
Midwest carries the complete line of world-famous Muller Tools for engravers.

Sold by

MIDWEST STEREOTYPE SUPPLY CO.

1651 Blue Island Avenue Chicago 8, Ill.

WEB BREAKS?



THE WEB BREAK DETECTOR SYSTEM DESIGNED FOR HIGH SPEED PRESSES

COMPLETE PRESS PROTECTION AGAINST WEB BREAKS

Specify the **COOKSEY SYSTEM**

for information write to:

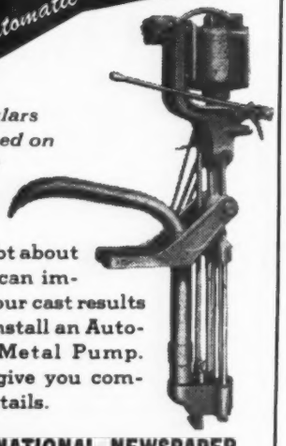
KORTHE ENGINEERING CO.

9353 Saginaw Ave. Schiller Park, Illinois

Sales Agents { The Goss Printing Press Co., Chicago
R. Hoe & Co., New York
Wood Newspaper Machinery Co., New York

WANT SOLID, SMOOTH FACED PLATES... EVERY TIME?

Automatic Metal Pump



Particulars furnished on request

No doubt about it, you can improve your cast results if you install an Automatic Metal Pump. Let us give you complete details.

INTERNATIONAL NEWSPAPER SUPPLY CORPORATION

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Cline-Westinghouse

—IN 58 CITIES OVER THE U. S. A.

you'll find qualified, factory trained men... all on 24 hour call. For day or night service call CLIFFSIDE 4-7500, Chicago.

Cline-Westinghouse

CLINE ELECTRIC MANUFACTURING CO.
3405 West 47th Street, Chicago 32 Illinois
Los Angeles 17, California • New York 17, N. Y.

materials handling systems in industry is made on the basis of originality and efficiency.

Silence-McColley Elected—Following the regular monthly meeting of the board of directors, Pres. John J. Shea, Wood Newspaper Machinery Corp., announced election of officers. William A. Silence, formerly assistant secretary, was elected secretary, succeeding the late C. Alfred Capen. Daniel McColley was elected secretary from his position as treasurer and controller. Silence has been with Wood Company for 27 years, starting his career in a clerical capacity.

HUBBARD

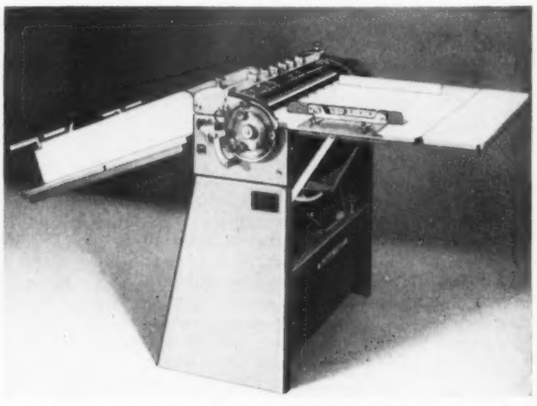
Heidelberg Salesman Named—Frank E. Hubbard has been appointed salesman in the Chicago territory as announced by Thomas A. Pisarra, regional manager for Heidelberg Eastern, Inc. Hubbard was formerly district sales manager for Charles Eneu Johnson & Co., and prior to that worked for the Ludlow Typograph Co.

Hoe Purchases Machine Tools—A program for $1.2 million purchase of machine tools, the largest in the history of the company, has been approved by the board of directors of R. Hoe & Co., Inc. According to J. L. Auer, president of the company, the program will result in new machine tools being introduced to every department of the several Hoe plants, machine shops, foundry and saw division. It will require about two years to complete. The modernization program together with an expanded research program will represent an expenditure of nearly $2 million.

FURLONG

Sales Consultant—Ed Furlong recently joined the staff of Type & Press of Illinois as sales consultant. For the past five years Furlong represented The E. G. Ryan Co. in sales, and previous to that was associated with Miller Printing Machinery Co. and American Type Founders, Inc. as a general sales representative.

Swayze Appointed to Sales Group—W. S. Loose, sales manager of the Magnesium Department, The Dow Chemical Co., announced the appointment of H. E. Swayze to the mill products sales group. Swayze was formerly in the department's Technical Service and Development Section, where he specialized in the application of magnesium to the printing field. In his new position, Swayze will specialize in



Rotary Slot Perforator—The 300 Series Rosback Rotary Slot Perforator, designed for either continuous or strike perforating, was announced by the F. P. Rosback Co. The Model No. 330 accommodates a sheet 30 in. wide, and Model No. 336 accommodates a 36 in. sheet. Both models will perforate stock from 9 lb. manifold to postcard weight. Heads are available for slot perforating, snapout or knife cut perforating, or scoring or creasing. Up to 20 pairs of heads can be used on the 30 in. machine; up to 25 pairs on the 36 in. machine. A calibrated dial determines skip positions at any length from $2\frac{3}{4}$ in. Minimum spacing between lines of slot perforations is $\frac{7}{8}$ in. An automatic electric indicator is included with the machine for accurate strike perforating. A plastic coated front feed table extension is also included as standard equipment. For further details, please mention PEE No. 530 in your request.

CLASSIFIED Advertising

ALL CLASSIFICATIONS

$.75 per line 1⅝" wide. Minimum ad 5 lines, 29 characters per line. Cash with order.

CLOSING DATE—15th of Month preceding Date of Issue

We will forward all mail addressed to Box Numbers. When answering Box Numbered ads, address as follows: Box Number . . . PRINTING EQUIPMENT Engineer, 1276 West 3rd Street, Cleveland 13, Ohio.

FOR SALE

Model 8 Linotype, serial 29325. Three magazines, fast distributor screws with rigid entrances, three almost-new molds, gas pot with new-style Merg controls, Emerson motor, low base, universal knife block, downstroke knife wiper, outside galley, low base. Machine was overhauled by Merg service man four years ago; can be seen in operation our plant. Price $1,500 fob our floor. Mathews Printing Co., 600 Capitol St., Charleston, W. Va.

FOR SALE

MULTIFACE PERFORATOR—Practically new with 8 pt. Opticon and 5 pt. Regal magazine. $1,600. Reply Box 527—PRINTING EQUIPMENT Engineer.

GOOD SPACE

CLASSIFIED ADS in PRINTING EQUIPMENT *Engineer* obtain good reader response for selling both old and new equipment and supplies for the Graphic Arts.

For good used equipment check

ATF Little Giant, 12 x 18", as is
ATF Little Chief, 14 x 20", as is
Webendorfer MAC, 17 x 22", as is
Miehle-Roland 29, 23 x 29", as is
Harris 245 (LST), 35 x 45" two-color, as is
Harris LSK, 42 x 58" two-color, as is

Box No. 1, Printing Equipment Engineer

ASSISTANT PRODUCTION MANAGER FOR METROPOLITAN NEWSPAPER

Preferably a mechanical engineer as an assistant to mechanical superintendent, metropolitan newspaper midwest. Previous newspaper experience desirable but not required. Would assist in all phases of production management of a daily newspaper, and also such work as planning and layout of the mechanical departments. Age 21 to 30 years. Write fully giving complete biography to Box 532.

CHAS. T. MAIN, INC.

Consulting Engineers Since 1893

ECONOMIC STUDIES, PROCESS STUDIES, DESIGN, SPECIFICATIONS PROCUREMENT AND SUPERVISION OF CONSTRUCTION FOR

NEWSPAPER AND PRINTING PLANTS

80 Federal St. Boston, Mass.
317 South Tryon St. Charlotte, N. C.

What Have You Devised? As a production and/or mechanical executive, our readers will be pleased to learn about something you have devised to improve plant operation. Just write informally to Editor, PRINTING EQUIPMENT *Engineer*, 1276 W. Third St., Cleveland 13, Ohio.

WEB DRYING APPARATUS

for ROTOGRAVURE • WEB-OFFSET • ANALINE LETTERPRESS

B. OFFEN & CO.

168 N. Michigan Ave. Chicago 1, Illinois

STAINLESS PRECISION TOOLS

Stainless Steel T-Squares, Triangles, Straightedges, and Precision Drawing Instruments and Scales. Circular and Linear Pantograph Engraving to order.

Catalog on request

THEO. ALTENEDER & SONS

Since 1850

1223 Spring Garden Street • Philadelphia 23, Pa.

If your printing plant executive status has changed, please notify *Printing Equipment Engineer* promptly. By so doing, you can be sure to receive this magazine promptly at your business address.

GAM WEB OFFSET PRESSES INC

DESIGNED AND BUILT TO YOUR SPECIFICATIONS by GEORGE HANTSCHO

Over 25 years' experience designing & building presses

Among presses delivered recently: 17 x 22, 22¾ x 36, 35 x 50

GRAPHIC ARTS MACHINERY, INC.

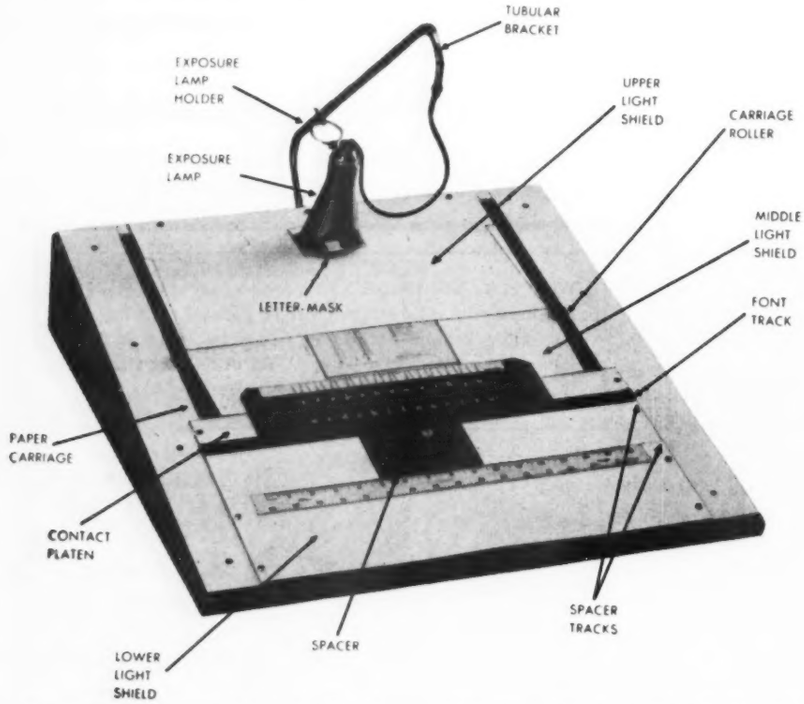
37 SOUTH 3rd AVENUE, MT. VERNON, N. Y.
MOunt Vernon 7-8200

First Miller-M.A.N. Press in U. S.—R. B. Tullis, president of Miller Printing Machinery Co., announced the installation of the first Miller-M.A.N. Offset Press in the United States at Rapid Service Press, Boston, Mass. The press, a Miller-M.A.N. 30 in. by 42 in. IV Two-Color, is the first in actual operation though others have been sold. Erection of the press was accomplished by a M.A.N. erector and Miller erectors, who recently received training at the M.A.N. Augsburg, West Germany, factory. Donald C. Hagar, president of Rapid Service Press, authorized the purchase of the press, its first two-color offset. Checking a sheet from the Miller-M.A.N. are, left to right, A. E. Searle, jr., vice president of Miller; Dan Ewing, Boston manager for Miller; Stuart Hagar, vice president and Don Hagar, president of Rapid Service Press.

photoengraving and truck body fields. Swayze will be succeeded by A. B. Fry who has been associated with Dow since 1941, specializing in magnesium finishing and battery development.

Evans of Hamilton Mfg. Retires—Howell G. Evans announced his resignation as senior vice president of Hamilton Mfg. Co. for reasons of poor health. Evans will continue with the company as a director and consultant. Evans joined the company in 1923, has served as sales executive since 1928 and as an officer since 1933. Evans is known for his many civic and trade association activities.

Dual-Lith Distributors Named—Davidson Corporation, a subsidiary of Mergenthaler Linotype, has appointed three new sales and service distributors for the Davidson Dual-Lith, a small offset unit. They are The Craftsmen Machinery Co., Boston; The Duplico Company, St. Louis, Mo., and Photo Offset Plate Service, Louisville, Ky. The representatives will offer sales and service facilities.



Pro-Type Incorporated has developed a portable, manually operated unit for setting type photographically. The machine is designed to compose consecutive lines of type or lettering on photosensitized ProPaper by means of a negative and contact photography. Illumination of working area, which can be as large as 12 in. by 17 in., is from the underside. When developed and dried, the composition will be in one piece. Spacing of letters, words and lines is controlled by various reading instruments. Sponsor states there are 10,000 type and lettering styles and sizes to choose from; sizes range from 6 pt. up. The machine is approx. 24 in. square and is constructed of formed and spot welded steel. For further details, please mention PEE No. 533 in your request.

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AUGUST 1955

P. E. E. REPRESENTATIVES

J. A. PETREQUIN, Sales Promotion Manager, 1276 West Third St., Cleveland 13, O. Phone PRospect 1-0088.

WILLIAM L. OSBORN, Eastern Advertising Representative, 2709 Grand Central Terminal, New York 17, N. Y. Phone MUrray 6-5980.

MELBURN O. SIMMONS, Mid-West Advertising Representative, 333 North Michigan Ave., Chicago 11, Ill. Phone DEarborn 2-6467.

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Hammond OF KALAMAZOO

TRIMOSAWS and STEREO EQUIPMENT

TRIMOSAWS

Glider
"The Saw with the Ball Bearing Table"

Mercury
"The Saw with the Ball Bearing Gauge"

Ben Franklin
"Finest Saw in the Low Price Field"

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EasyKaster

5 and 6 Column
EasyKaster

EasyKaster
Pig Molder

Scorchers

EasyKaster
Scorcher

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Scorcher

Routers

Radial Router

Router Planer

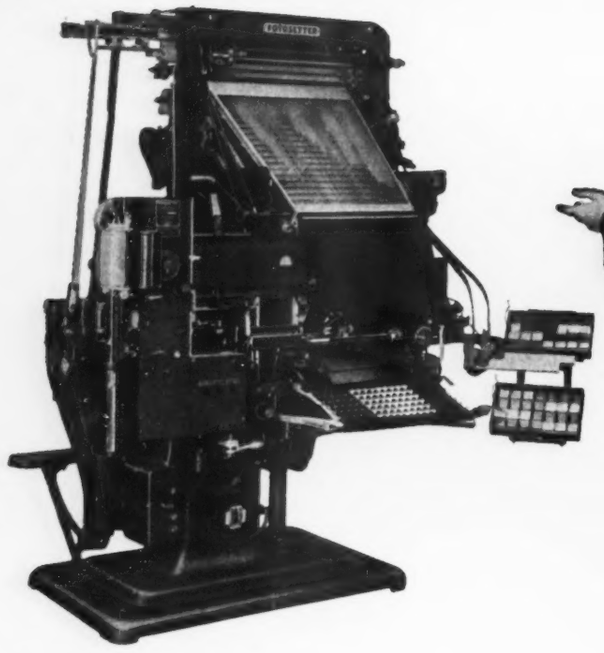
PlateShaver

Full Page
PlateShaver

Hammond Machinery Builders INC.

1604 DOUGLAS AVENUE KALAMAZOO, MICHIGAN

No. 1 in a Series



"What does the FOTOSETTER do better?"

"A great many valuable things . . ."

The Fotosetter certainly has proved its advantages. During six years of commercial use it has developed many well proved areas of superiority for photographic composition such as:

1. *Better negatives* from sharp, perfect images.
2. *Better repros* directly from the keyboard.
3. *In every Fotosetter face* all sizes are immediately available.
4. *Every Fotosetter face* sets in every desirable size including 7, 9, 11, 13, 16 and 30 pt.
5. *Enlargements or reductions* are easy to make, need no retouching, are sharp and clean.
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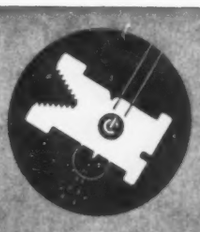
7. *Angles, curves and other effects* are as easily made up to layout requirements as straight matter.
8. *Maximum typographic expression* and flexibility with full kerning, true italics and small caps, connected scripts, emblems and trademarks—all from the keyboard.
9. *Eliminates hours* of camera, darkroom, retouching and repro proofing work. It also eliminates time spent breaking up forms.

Whether your interest lies in newspaper, job printing, advertising composition or specialties, you will find that Fotosetter photographic composition can do your work better and more efficiently.

This is the first in a series of ads designed to answer the question "What does a Fotosetter do better?". Reprints of the entire series will be available. Write for them.



Intertype Corporation

360 Furman Street, Brooklyn 1, New York • Chicago, San Francisco, Los Angeles, New Orleans, Boston
In Canada: Toronto Type Foundry Co., Ltd., Toronto, Montreal, Winnipeg, Vancouver, Halifax

If it isn't made by Intertype
it isn't a FOTOSETTER.

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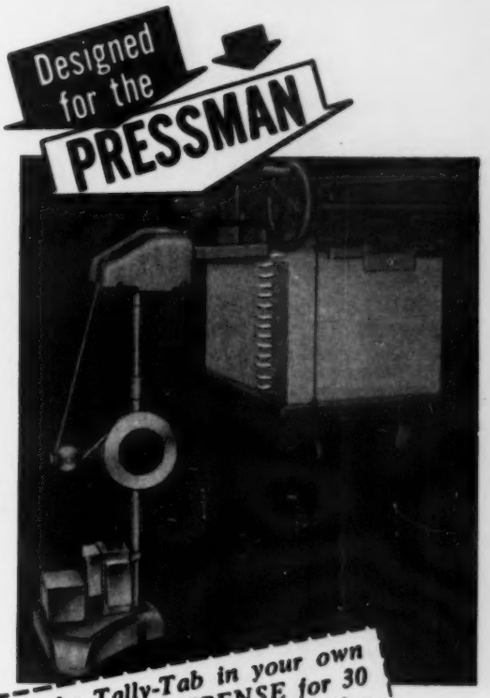
NEW IMPROVED

TALLY-TAB®

MODEL B

Automatic Counter and Tabber

Completely redesigned, improved, streamlined



Engineered for the Pressman!

Counts and tabs 25, 50, 100, 250, or 500 sheets. Simple to set, with make-up switch for spoiled sheets and dial for resetting. Fool-proof, automatic operation on any style pile delivery press — offset or letterpress. Furnishes absolutely accurate count for padding, cutting, folding, sheeting or any other operation requiring precise count control. Pressmen in some of the largest plants in the country use and swear by the Tally-Tab!

Try the Tally-Tab in your own plant AT OUR EXPENSE for 30 days free . . . no obligation! Also get descriptive folder. 'Phone or write today! FREE 30 DAY TRIAL

TRY TALLY-TAB FOR 30 DAYS AT OUR EXPENSE

We want to send you a Tally-Tab to try in your plant for 30 days at our expense. We never expect to see that Tally-Tab again for we're sure that once you've used it, you won't part with it. Call or write us today to send you a Tally-Tab for trial.

MILLER-LAUFFER

Printing Equipment Corporation

280 LAFAYETTE STREET, NEW YORK 12, N. Y.

WOrth 6-0400

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INK SERVICE

FOR
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PRINTERS

CONSULTATION
COLOR MATCHING
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PRINTING INK DIVISION